

above ground storage tank  
air quality  
asbestos/lead-based paint  
baseline environmental assessment  
brownfield redevelopment  
building/infrastructure restoration  
caisson/piles  
coatings  
concrete  
construction materials services  
corrosion  
dewatering  
drilling  
due care analysis  
earth retention system  
environmental compliance  
environmental site assessment  
facility asset management  
failure analyses  
forensic engineering  
foundation engineering  
geodynamic/vibration  
geophysical survey  
geosynthetic  
greyfield redevelopment  
ground modification  
hydrogeologic evaluation  
industrial hygiene  
indoor air quality/mold  
instrumentation  
masonry/stone  
metals  
nondestructive testing  
pavement evaluation/design  
property condition assessment  
regulatory compliance  
remediation  
risk assessment  
roof system management  
sealants/waterproofing  
settlement analysis  
slope stability  
storm water management  
structural steel/welding  
underground storage tank

**PHASE II  
ENVIRONMENTAL SITE ASSESSMENT  
REPORT**

**30161 SOUTHFIELD ROAD  
SOUTHFIELD, MICHIGAN**

**PREPARED FOR:**

Agree Development, LLC  
31850 Northwestern Highway  
Farmington Hills, Michigan

**PREPARED BY:**

SOIL AND MATERIALS ENGINEERS, INC.  
43980 PLYMOUTH OAKS BOULEVARD  
PLYMOUTH, MICHIGAN 49170

SME Project Number: PE54232D-08

July 19, 2011



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July 19, 2011

Mr. Jared Gell, CCIM  
Agree Development, LLC  
31850 Northwestern Highway  
Farmington Hills, Michigan 48334

RE: Phase II Environmental Site Assessment Report  
30161 Southfield Road  
Southfield, Michigan 48076  
SME Project Number: PE54232D-08

Dear Mr. Gell:

Soil and Materials Engineers, Inc. (SME) has prepared this report to summarize the results of the environmental assessment conducted at 30161 Southfield Road, in the city of Southfield, Oakland County, Michigan (Property).

We appreciate the opportunity to be of continued service to you on this project. If you have any questions or comments, please call.

Very truly yours,

**SOIL AND MATERIALS ENGINEERS, INC.**

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Enclosures: 3 printed reports and 2 CDs

Distribution: Ms. Rochelle Freeman, City of Southfield (2 CDs)

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consultants in the geosciences, materials, and the environment

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## 1.0 INTRODUCTION

This report documents the activities and findings of a Phase II Environmental Site Assessment (ESA) of the site located at 30161 Southfield Road, in the City of Southfield, Oakland County, Michigan (hereinafter referred to as the Property). At the time of the investigation, the Property consisted of approximately 1.66 acres of land developed with an approximately 36,850-square foot, three-story multi-tenant office building. The remainder of the Property was developed with paved parking and landscaped areas. The surrounding area was primarily commercial with some residential properties located to the south and west of the Property. The general location of the Property is depicted in Figure 1, and existing Property features along with soil boring locations are displayed in Figure 2.

The objective of the Phase II ESA was to assess potential environmental impact associated with Recognized Environmental Conditions (RECs) at the Property identified in SME's March 1, 2011, Phase I ESA. SME identified the following RECs in connection with the Property:

- The potential impact on the Property from lead based paint and other unknown hazardous building constituents during the demolition and redevelopment stages of the Property.
- The potential use of fill soils on the Property to raise grades or fill in possible basements of the former structures on the Property.
- The historical use of the south adjoining site as an orchard.

SME's specific scope of assessment, assessment procedures, results of the assessment and conclusions are presented in the following sections.

## 2.0 SCOPE OF ASSESSMENT

The Phase II ESA was conducted in accordance with the scope of service described in SME's January 31, 2011, Sampling and Analysis Plan.

The following is a summary of the Phase II ESA scope of work which is discussed in more detail in Section 3.0:

- Nine soil borings (SB1 through SB9; Figure 2) were advanced to depths ranging from approximately 4 feet to 16 feet below the ground surface (bgs). SME collected soil samples from each boring location at two foot intervals. The soil samples were field screened and the interval with highest potential for impact (based on the field screening and REC being assessed) were submitted for laboratory analysis.
- A temporary groundwater monitoring well was installed at soil boring locations SB1, SB3, SB5, SB6, and SB7. SME collected a groundwater sample from each of these monitoring well for potential chemical analyses.
- SME compared the analytical results to Michigan Department of Environmental Quality (MDEQ) Part 201 Generic Residential Cleanup Criteria and Screening Levels, dated March 25, 2011.
- The results of chemical analyses were evaluated, and this Phase II ESA report was prepared.

A Phase II ESA report was prepared rather than a Baseline Environmental Assessment as SME determined the Property was not a “facility”.

### **3.0 SAMPLING AND ANALYSIS PROCEDURES**

SME advanced nine direct push soil borings (SB1 through SB9), and collected soil and groundwater samples at the Property on May 12, 2011. The sampling locations are depicted on Figure 2. Borings were advanced to depths ranging from 4 feet to 16 feet below ground surface (bgs); groundwater was encountered at seven of the nine locations. SME collected soil samples from each boring location at two foot intervals. One to two soil samples from each location, excluding SB3 and SB7, were containerized for potential sample analysis based on visual observations, photoionization detector (PID) readings, staining, or odors. One groundwater sample was also collected from soil borings SB1, SB3, SB5, SB6, and SB7 for potential sample analysis. The specific sample intervals submitted for laboratory analysis are provided on Tables 1 and 2. SME advanced the following soil borings to evaluate the RECs identified in the Phase I ESA:

- Seven soil borings (SB1 through SB7) were advanced throughout the Property to evaluate potential impact from demolition and redevelopment debris and from potential fill soils used on the Property.
- Two soil borings (SB8 and SB9) were advanced along the southern Property boundary to evaluate environmental impact from the former usage of the south adjoining site as an orchard.

Sampling and analysis procedures used in this assessment were in accordance with procedures and guidance published by the MDEQ in relevant operational memoranda, and in accordance with the Sampling and Analysis Plan for the site dated January 31, 2011. Summaries of the sampling and analysis procedures are presented in the following subsections.

#### **3.1 Soil Boring Sampling Procedures**

SME collected soil samples using a truck-mounted Geoprobe direct-push sampling rig. Soil samples were collected with the direct-push coring device using 48-inch long samplers. The samplers were lined with disposable acetate liners. Discrete soil samples were collected from the liners for soil classification and field screening by cutting open the acetate liner with a decontaminated utility knife and transferring the soil into an unpreserved plastic re-sealable bag. The discrete soil samples were classified in accordance with the Unified Soil Classification System (USCS).

SME screened soil samples in the field with a 10.6-eV photoionization detector (PID). The field screening was conducted by allowing time for the headspace above the soils collected for PID screening to equilibrate in the re-sealable plastic bags. The bags were then opened enough to insert the tip of the PID. The PID registers the presence of volatile organic vapors with a detection limit of approximately one part per million (ppm). Soil classifications and field screening results are presented in the Soil Boring Logs provided in Appendix A.

In addition to soil classification and field screening, soil samples were selected for potential chemical analysis and transferred into laboratory supplied container(s). SME selected soil samples for potential chemical analysis based on sample depth, field screening results, soil characteristics, and the specific REC being assessed. Soil samples collected for analysis of VOCs were collected directly from the acetate liner with a laboratory-supplied syringe-style coring device and placed in a 40-ml vial with methanol preservative in accordance with EPA Method 5035A. Soil samples collected for analysis of other constituents were homogenized prior to transferring the soil to a laboratory-supplied, pre-cleaned, 8-ounce glass jar.

Residual soil cuttings generated from the soil borings were returned to the corresponding bore hole after sampling activities were completed. The remaining space in the bore holes was filled with bentonite chips and patched with either asphalt or soil.

### **3.2      Temporary Groundwater Monitoring Well Sampling Procedures**

SME collected groundwater samples from soil borings SB1, SB3, SB5, SB6, and SB7 for potential chemical analyses. Groundwater samples were collected by installing a pre-packed temporary PVC well screen into the saturated zones in the open borehole. The well screens were five feet in length, had a slot size of 0.010 inches, and were attached to one inch diameter PVC risers. The top of the well screens were placed at or above the depth of groundwater encountered during drilling. SME purged groundwater using polyethylene tubing connected to a peristaltic pump at a low-flow rate between 100 milliliter per minute (mL/min) and 500 mL/min and allowed the groundwater to stabilize prior to sampling. Water quality parameters pH, specific conductivity, and temperature were monitored for stabilization with an Oakton pH/Con 10 Meter. SME collected un-filtered groundwater samples using laboratory-supplied, pre-preserved containers directly from the effluent end of the pump tubing. After purging was completed, groundwater samples were collected from each well at the same purging flow rate. The analytical laboratory supplied pre-cleaned containers with appropriate preservatives for groundwater samples. After sample collection, the containerized samples were stored in ice filled coolers, until delivery to the analytical laboratory.

### **3.3 Quality Assurance/Quality Control (QA/QC) Procedures**

MDEQ protocols described in MDEQ-RRD *Operational Memorandum No. 2*, October 22, 2004, and procedures described in the January 31, 2011 *Sampling and Analysis Plan* for the site were used to guide sample collection, management, analyses, and quality assessment/quality control (QA/QC) procedures. Soil boring sampling tools were cleaned prior to drilling and/or between each boring location with a high pressure/temperature wash. In addition, prior to cutting each acetate liner, the utility knife was cleaned with a laboratory grade detergent and rinsed with distilled water. New pairs of disposable nitrile sampling gloves were used to transfer each soil sample from the acetate liner or groundwater samples to the sample jars for potential chemical analyses.

The analytical laboratory supplied the containers used for soil and groundwater sample collection. The sample jars were supplied pre-cleaned and containing the appropriate preservative. After sample collection, the containerized samples were kept cool, i.e. kept on ice or refrigerated, until delivery to the analytical laboratory. SME field staff followed chain-of-custody procedures to document the sample handling sequence.

SME submitted the soil and groundwater samples to Fibertec for chemical analyses. Analytical methods, laboratory reporting limits (RLs), and chain of custody documentation are provided in the analytical report in Appendix B. The analytical methods and detection limits were consistent with MDEQ – RRD’s Operational Memorandum No. 2, dated July 5, 2007.

### **3.4 Chemical Analyses**

SME selected the target analytes for this assessment as representative of the hazardous substances most likely to have been released on the Property based on the current/historical operations and types of chemicals stored on the Property. The following list explains the sampling rationale for the chosen parameters and sampling locations analyzed for the assessment:

- Potential for demolition debris and fill (SB1 through SB7) – VOCs, PAHs, arsenic, barium, cadmium, copper, chromium, lead, mercury, selenium, silver, zinc, hexavalent chromium and asbestos to assess for impact related to (1) the potential impact on the Property from lead based paint and other unknown hazardous building constituents during the demolition and redevelopment stages of the Property and (2) the potential use of fill soils on the Property to raise grades or fill in possible basements of the former structures on the Property.

- Historic south adjoining orchard (SB8 and SB9) – cyanide, arsenic, cadmium, lead, mercury, herbicides and pesticides to assess former historical use of the south adjoining site as an orchard. Spray-applied treatments to the ground surface and vegetation of an orchard would likely have contained cyanide, arsenic, cadmium, lead, mercury, herbicides and pesticides.

Fibertec Environmental Services (Fibertec) of Holt, Michigan provided laboratory services for the assessment.

Laboratory analyses and field screening were performed as described in the project Sampling and Analysis Plan (SAP) dated January 31, 2011. The samples were analyzed for the following constituents using the referenced methods:

- VOCs– EPA Method 8260
- PAHs - EPA Method 8270
- Metals - EPA Methods 6020 and 7471 (Mercury)
- Cyanide – EPA Method 9014
- Herbicide – EPA Method 8151
- Pesticides – EPA Method 8081

Chemical analysis methods for each analyte group generally conformed to the procedures described in the EPA SW-846 and MDEQ-RRD's October 22, 2004, ***Operational Memorandum No. 2*** (Op Memo 2). Specific sample preparation, analysis methods, and method reporting limits (RLs) are also included in the laboratory chemical analysis reports provided in Appendix B.

## 4.0 FINDINGS

The subsurface conditions observed during the Phase II ESA and results of chemical analyses are presented in the following subsections.

### **4.1 Subsurface Conditions**

Soil boring logs documenting observed subsurface conditions are provided in Appendix A. Figure No. 2 is a Soil Boring Location Diagram. A generalized summary of the soils encountered below the surface cover (topsoil, concrete, or asphalt) in the borings is given below, beginning at the existing ground surface and continuing downward.

- Stratum 1: Fill – Fill was observed beneath the surface cover in each boring advanced during this environmental site assessment. The fill varied in composition from fine to medium sand with trace concrete, brick fragments, or cinders to clay with trace sand and gravel. The soil boring location with the observed thinnest fill stratum was SB-9, located on the southeast end of the Property, which had a fill stratum that extended to a depth of 2.5 feet below ground surface (bgs). Soil boring SB6, advanced on the southwestern portion of the Property, was observed to contain a fill stratum that extended 9.75 feet bgs. Groundwater was measured at 9.5 feet bgs in soil boring SB6. The other borings advanced during this assessment did not have groundwater in their fill strata. No staining, odors, nor VOCs (based on PID screening) were observed in the fill strata.
- Stratum 2: Sand – The sand underlying the fill was comprised of poorly graded sand varying in grain size from fine sand to medium to coarse sand. The sand was first encountered at depths of 2.5 feet to 9.75 feet bgs. This stratum extended to depths ranging from 15 feet bgs at SB6 and SB7, both advanced on the southern portion of the Property, to 16 feet bgs in soil borings SB2 and SB5, located on the north and the west portions of the Property respectively. The sand stratum was not observed in soil borings SB8 and SB9 which were both advanced to only four feet bgs. Groundwater depths were measured from 8.75 feet bgs at soil boring location SB1, located on the northwestern portion of the Property, to 9.5 feet bgs at soil boring locations SB5, SB6, and SB7 located on the south and west portions of the Property. No staining, odors, nor VOCs (based on PID screening) were observed in the sand strata.
- Stratum 3: Clay – Clay was observed beneath the sand stratum in soil borings SB3, SB4, SB6, and SB7. Clays were encountered in these borings to a depth of 16 feet bgs which was the maximum explored depth of boring at each of these locations. No staining, odors, nor VOCs (based on PID screening) were detected in the clay stratum.

Refer to the logs for the soil and groundwater conditions at the specific soil boring locations. Stratification lines on the logs indicate a general transition between soil types, and are not intended to show an area of exact geological change.

#### **4.2 Results of Chemical Analyses**

The results from chemical analyses of soil and groundwater samples are summarized in Tables 1 and 2. The chemical analyses results in Tables 1 and 2 were compared to the Part 201 generic residential cleanup criteria to evaluate environmental liability management for the prospective purchaser, and to evaluate due care issues related to future use of the Property. Copies of the laboratory chemical analysis reports are attached in Appendix B.

##### **Results for Chemical Analyses of Soil Samples**

The results of the chemical analysis of soil samples demonstrated that arsenic was measured in excess of the Part 201 Residential Drinking Water Protection Criteria (DWP) and Groundwater Surface Water Interface Protection Criteria (GSIP) in two shallow soil samples, SB8-S2 and SB9-S1; both borings were advanced near the southern Property boundary. In SME's opinion, the arsenic in soil at soil boring locations SB8 and SB9 that exceed the DWP and GSIP criteria does not warrant the Property being designated a "facility" for the following reasons:

- The arsenic concentrations are representative of background levels in southeastern Michigan. Arsenic was measured in two soil samples SB8-S2 (7,100 µg/Kg) and SB9-S1 (6,200 µg/Kg) above Part 201 DWP and GSIP criteria (5,800 µg/Kg). The MDEQ has stated to SME that 13,000 µg/Kg of arsenic is a representative concentration for background levels in southeast Michigan. Additionally, the MDEQ's 2005 Michigan Background Soil Survey reported arsenic background levels (mean plus 3 standard deviations) for sand soils in southeast Michigan, as encountered at SB8 and SB9, is (10,700 µg/Kg). Therefore, in our experience the arsenic results are not indicative of a "release." Rather, the concentrations are consistent with native soils in southeast Michigan.
- Only two soil samples contain arsenic above the criteria and this limited extent of soil containing arsenic that could pose a risk to groundwater is small and not a significant threat to groundwater.
- Based on a t-test statistical analysis of the Property data and the background data set for southeast Michigan, there is no significant differences in the data set. The soils are representative of background levels in southeastern Michigan.

In SME's opinion, analysis of the data demonstrates the arsenic at SB8 and SB9 does not represent impact from anthropogenic sources and as such, does not warrant the Property being designated a "facility". In addition to this analysis, the pathway would not be relevant at the Property. The pathways for arsenic in soil to reach a surface water body are either by leaching to groundwater and then groundwater migration to the surface water body or into a storm sewer that flows to a surface water body. The arsenic in soil would not pose a risk to surface water bodies for the following reasons:

- Arsenic was not detected above target method detection levels in any of the groundwater samples collected from the Property. Therefore, it does not appear that arsenic is leaching from the soil into groundwater.
- The nearest surface water body is Evans Ditch, located approximately 2/3 mile to the north and west of the Property. Based on the distance of the nearest surface water body, it is unlikely that arsenic, if it reached groundwater, would reach this surface water body.
- There is no possibility groundwater can infiltrate the storm sewers or the utility corridors as the invert depth of the storm sewers in the area of SB8 and SB9 (5.4 to 8.2 feet) is well above groundwater in this area, which is encountered at a depth 9.5 feet bgs in this area of the Property.

In summary, in SME's opinion, the arsenic in soil at SB8 and SB9 that exceeds the DWP and GSIP criteria does not warrant the Property being designated a "facility" for the following reasons:

- Arsenic was not detected above target method detection levels in any of the groundwater samples collected from the Property, demonstrating the arsenic is not leaching to groundwater.
- The two samples containing arsenic above the criteria are the only samples at the Property that exceed the criteria, indicating the extent of soil containing arsenic that could pose a risk to groundwater is small and not a significant threat to groundwater.
- The soils are representative of background levels in southeastern Michigan, indicating the concentrations do not represent impact from anthropogenic sources.

#### Results for Chemical Analyses of Groundwater Samples

The results of the chemical analysis of groundwater at the Property confirmed that selenium was measured in excess of Part 201 Residential Groundwater Surface Water Interface Criteria (GSI) in one groundwater sample, SB3-GW, collected north of the building. The pathways for selenium in groundwater to reach a surface water body are either through groundwater migration to the surface water body or into a storm sewer that flows to a surface

water body. In SME's opinion, the selenium in groundwater at SB3 poses no risk to surface water bodies and does not appear to be relevant at the Property for the following reasons:

- The detection of selenium at SB3 is not representative of Property conditions as it was not detected elsewhere.
- The nearest surface water body is Evans Ditch, located approximately 2/3 mile to the north and west of the Property. Based on the distance of the nearest surface water body, it is unlikely that selenium in groundwater would reach this surface water body.
- There is no possibility the groundwater can infiltrate the storm sewers or the utility corridors as the invert depth of the storm sewers in the area of SB3 (5.3 to 5.9 feet) is well above groundwater in this area, which is encountered at depths ranging from 8.75 to 9.5 feet bgs.

Based on these ameliorating factors, in SME's opinion, the subsurface conditions indicate the GSI pathway is not relevant or applicable to the Property.

#### **4.3 QA/QC Evaluation**

The laboratory case narratives and soil RLs are provided in the laboratory chemical analysis reports in Appendix B. No VOCs were measured in the trip blank, methanol blank, equipment blank, or field blank samples at concentrations greater than the RLs. The soil results from the duplicate sample collected at SB1 showed excellent agreement with respect to the metals with a relative percent difference ranging from 6% to 36% depending on the metal. No SVOCs were detected in the SB1 duplicate, and SVOC concentrations in the original sample were not detected above Part 201 generic cleanup criteria. The duplicate groundwater sample collected at SB1 was analyzed for asbestos which was measured below Part 201 cleanup criteria in the duplicate sample and was not detected above reporting limits in the original sample.

## 5.0 CONCLUSIONS

The available assessment data revealed no evidence of environmental impact of soil or groundwater on the Property at levels above Part 201 generic residential use criteria with the exception of arsenic in soil above DWP and GSIP and selenium in groundwater above GSI. As presented in Section 4.2 of this report, in SME's opinion, the soil and groundwater data does not support the conclusion that the Property is a "facility" as defined by Part 201 of Michigan Act 451.

## 6.0 GENERAL COMMENTS

The conclusions in this Phase II ESA report are based on information obtained from the area of investigation only as described in this report. The assessment was designed for the purposes described herein and was not designed as a complete characterization of the subsurface conditions at the Property. SME cannot attest to the possibility that other regulated constituents are present outside the evaluated area and within the Property boundary. If additional surface, subsurface, or chemical data become available after the date of issue of this report, the conclusions contained in this report may require modification after SME has reviewed the additional information. This review by SME of additional information would be conducted upon receipt of a request from the client. SME's conclusions are based on interpretation of the aforementioned regulations. The MDEQ interpretation may vary.

In the process of obtaining information in preparation of this letter report, procedures were followed that represent reasonable practices and principles in a manner consistent with that level of care and skill ordinarily exercised by members of this profession currently practicing under similar conditions.

SME understands Agree Realty Corporation, Agree Development, LLC and Agree Southfield, LLC will rely upon the professional opinions and representations contained in the report in accordance with the terms and conditions agreed upon for the project. This reliance is not to be construed as a warranty or guarantee on the part of SME.

## **TABLES**

**TABLE NO. 1**  
**SOIL SAMPLE RESULTS**  
**Page 1 of 1**  
**SME Project No. PE54232D-08**

Constituent*	Groundwater Protection				Indoor Air		Ambient Air (Y)				Direct Contact				Sample Identification	SB1-S1	SB1-S1 Dup1-S	SB2-S5	SB4-S1	SB5-S2	SB6-S5	SB8-S2	SB9-S1	
	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels	Sample Depth (feet bgs)	0-2	0-2	8-10	0-2	2-4	8-10	2-4	0-2	2-4	0-2	
*(Refer to detailed laboratory report for method reference data)																								
<b>Volatiles</b>																								
Dibromochloropropane	96-12-8	NA	<b>10</b>	ID	1,200	1,200	13,000	13,000	13,000	13,000,000	1,200	1,200		<11	<11	<10	<11	<11	NA	NA				
1,2,4-Trimethylbenzene	95-63-6	NA	2,100	570	110,000	110,000	21,000,000	500,000,000	500,000,000	82,000,000,000	110,000	1.1E+5		<100	<100	<b>190</b>	<100	<100	<100	<100	NA	NA		
<b>Semivolatiles, PAHs</b>																								
Benzo(a)anthracene	56-55-3	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	20,000	NA		<b>410</b>	<330	<330	<330	<330	<b>600</b>	NA	NA				
Benzo(a)pyrene	50-32-8	NA	NLL	NLL	NLV	NLV	NLV	NLV	1,500,000	2,000	NA		<b>340</b>	<330	<330	<330	<330	<b>630</b>	NA	NA				
Benzofluoranthene	205-99-2	NA	NLL	NLL	ID	ID	ID	ID	ID	20,000	NA		<b>470</b>	<330	<330	<330	<330	<b>830</b>	NA	NA				
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLV	NLV	NLV	NLV	800,000,000	2,500,000	NA		<330	<330	<330	<330	<b>440</b>	NA	NA					
Chrysene	218-01-9	NA	NLL	NLL	ID	ID	ID	ID	ID	2,000,000	NA		<330	<330	<330	<330	<b>580</b>	NA	NA					
Fluoranthene	206-44-0	NA	730,000	5,500	730,000	1,000,000,000	740,000,000	740,000,000	740,000,000	9,300,000,000	46,000,000	NA		<b>750</b>	<330	<330	<330	<330	<b>1,200</b>	NA	NA			
Indeno(1,2,3-cd)pyrene	193-39-5	NA	NLL	NLL	NLV	NLV	NLV	NLV	ID	20,000	NA		<330	<330	<330	<330	<b>450</b>	NA	NA					
Phenanthrene	85-01-8	NA	56,000	2,100	1,100,000	2,800,000	160,000	160,000	160,000	6,700,000	1,600,000	NA		<330	<330	<330	<330	<b>860</b>	NA	NA				
Pyrene	129-00-0	NA	480,000	ID	480,000	1,000,000,000	650,000,000	650,000,000	67,000,000,000	29,000,000	NA		<b>550</b>	<330	<330	<330	<330	<b>990</b>	NA	NA				
<b>Metals</b>																								
Arsenic	7440-38-2	5,800	<b>5,800</b>	<b>5,800</b>	2,000,000	NLV	NLV	NLV	NLV	720,000	7,600	NA		<b>4,700</b>	<b>4,400</b>	<b>3,000</b>	<b>4,800</b>	<b>1,900</b>	<b>1,800</b>	<b>7,100</b>	<b>6,200</b>			
Barium	7440-39-3	75,000	1,300,000	440,000	1,000,000,000	NLV	NLV	NLV	NLV	330,000,000	37,000,000	NA		<b>40,000</b>	<b>34,000</b>	<b>5,100</b>	<b>37,000</b>	<b>13,000</b>	<b>20,000</b>	NA	NA			
Cadmium	7440-43-9	1,200	6,000	3,600	230,000,000	NLV	NLV	NLV	NLV	1,700,000	550,000	NA		<b>270</b>	<b>210</b>	<b>54</b>	<b>180</b>	<b>70</b>	<b>75</b>	<b>250</b>	<b>130</b>			
Chromium, Total	7440-47-3	18,000 (total)	1,000,000,000	3,000,000,000	1,000,000,000	NLV	NLV	NLV	NLV	330,000,000	790,000,000	NA		<b>8,900</b>	<b>10,000</b>	<b>3,300</b>	<b>10,000</b>	<b>6,000</b>	<b>5,100</b>	NA	NA			
Chromium VI	18540-29-9	NA	30,000	3,300	140,000,000	NLV	NLV	NLV	NLV	260,000	2,500,000	NA		<2,800	<2,700	<2,600	<2,800	<2,800	<2,600	NA	NA			
Copper	7440-50-8	32,000	5,800,000	73,000	1,000,000,000	NLV	NLV	NLV	NLV	130,000,000	20,000,000	NA		<b>15,000</b>	<b>11,000</b>	<b>7,400</b>	<b>12,000</b>	<b>2,800</b>	<b>5,400</b>	NA	NA			
Lead	7439-92-1	21,000	700,000	2,800,000	ID	NLV	NLV	NLV	NLV	100,000,000	400,000	NA		<b>52,000</b>	<b>34,000</b>	<b>2,700</b>	<b>20,000</b>	<b>3,300</b>	<b>5,300</b>	<b>38,000</b>	<b>14,000</b>			
Mercury, Total	7439-97-6	130	1,700	<i>130</i>	47,000	48,000	52,000	52,000	52,000	20,000,000	160,000	NA		<50	<50	<50	<b>70</b>	<50	<50	<50	<50			
Selenium	7782-49-2	410	4,000	<i>410</i>	78,000,000	NLV	NLV	NLV	NLV	130,000,000	2,600,000	NA		<b>320</b>	<b>280</b>	<b>270</b>	<b>270</b>	<200	<b>290</b>	NA	NA			
Zinc	7440-66-6	47,000	2,400,000	170,000	1,000,000,000	NLV	NLV	NLV	NLV	ID	170,000,000	NA		<b>50,000</b>	<b>52,000</b>	<b>14,000</b>	<b>45,000</b>	<b>11,000</b>	<b>20,000</b>	NA	NA			
<b>Pesticides</b>																								
alpha-Hexachlorocyclohexane	319-84-6	NA	<b>18</b>	ID	2,500	30,000	12,000	22,000	25,000	1,700,000	2,600	NA		NA	NA	NA	NA	NA	NA	<23	<22			
Lindane	58-89-9	NA	<b>20</b>	<b>20</b>	7,100	ID	ID	ID	ID	8,300	NA		NA	NA	NA	NA	NA	NA	NA	<23	<22			
<b>Nonspecific Grouping</b>																								
Cyanide	57-12-5	390 (total)	4,000	<b>100</b>	250,000	NLV	NLV	NLV	NLV	250,000	12,000	NA		NA	NA	NA	NA	NA	<200	<200				
Asbestos	1332214	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	10,000,000	ID	NA		NA	NA	NAD	NAD	NAD	NAD	NA	NA			

Notes:

- Concentrations reported in micrograms per kilogram (ug/kg).
- Criteria taken from RRD Operational Memorandum No. 1, Table 2. Soil: Residential and Non-Residential Part 201 Generic Cleanup Criteria and Screening levels, dated March 25, 2011.
- Only detected analytes, or analytes with reporting limits above criteria, are displayed in the table. See Analytical for full list of analyzed

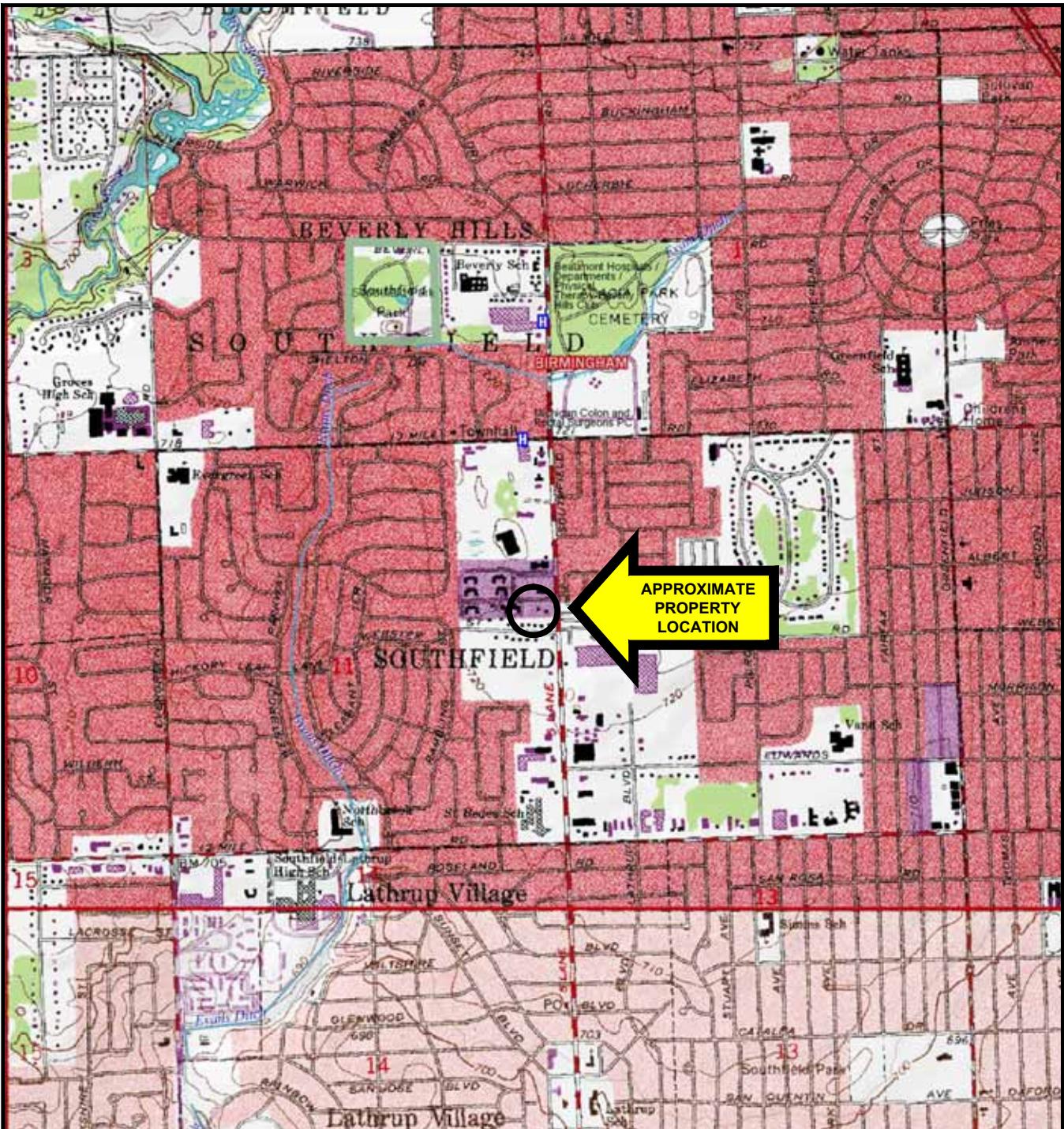
**TABLE NO. 2**  
**GROUNDWATER SAMPLE RESULTS**  
**1 of 1**  
**SME Project No. PE54232D-08**

Constituent*	Chemical Abstract Service Number	Residential & Commercial Drinking Water Criteria & RBSLs	Non-residential Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level	Sample Identification	SB1-GW	Dup1-GW SB1-GW	SB3-GW	SB5-GW	SB6-GW	SB-7-GW		
		Screen Depth (feet)	8-13	8-13	8-13	8.5-13.5	8-13				Collect Date	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011		
		REC Addressed	Demolition Debris & Fill																
<b>Volatiles</b>																			
Dibromochloropropane	96-12-8	0.2	0.2	ID	1,200	1,200	390	1,230	NA	ID		NA	NA	<1.0	NA	NA	<1.0		
Ethylene dibromide	106-93-4	0.05	0.05	5.7	2,400	15,000	25	4,200,000	ID	ID		NA	NA	<1.0	NA	NA	<1.0		
<b>Semivolatiles, PAHs</b>																			
Semivolatiles	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL	<RL	<RL	<RL		
<b>Metals</b>																			
Mercury, Total	7439-97-6	2.0	2.0	0.0013	56	56	56	56	ID	ID		NA	NA	<0.20	NA	NA	<0.20		
Selenium	7782-49-2	50	50	5.0	NLV	NLV	970,000	NA	ID	ID		NA	NA	10	NA	NA	<5.0		
<b>Nonspecific Grouping</b>																			
Asbestos	1332214	7,000,000	7,000,000	NA	NLV	NLV	ID	NA	NA	ID	<0.0001	0.0044	0.0006	0.0064	0.0081	0.0027			

**Notes:**

- Concentrations reported in micrograms per liter (ug/L).
- Criteria taken from RRD Operational Memorandum No. 1, Table 1. Groundwater: Residential and Non-Residential Part 201 Generic Cleanup Criteria and Screening levels, dated March 25, 2011.
- Only detected analytes or analytes with reporting limits above criteria are displayed in the table. See Analytical for full list of analyzed parameters.  
Asbestos was included in the table because of it's nonspecific grouping.
- Detected results shown in BOLD. Results exceeding one or more criteria are shaded, as are the criteria.
- CS - Criterion is specific to individual constituent.
- <RL - Analytical result was below laboratory reporting limit(s).
- Bold <RL results have an elevated reporting limit that exceeds one or more criteria.
- ID - Insufficient data to develop criteria.
- NA = Not applicable or not analyzed.
- NLV - Not likely to volatilize.
- \* = GSI Protection was calculated for the indicated metals using the MDNRE spreadsheet for calculating GSI. A default water hardness value of 150 mg/kg as CaCO<sub>3</sub> was used to calculate GSI. Results are presented for surface water receiving bodies not protected as a drinking water source.
- Italicized* = the respective criterion was below the Statewide Default Background Level (SDBL) and therefore the value defaulted to the SDBL value.
- \*\* = Total xylenes was calculated as the sum of o-xylene and m,p-xylene concentrations.
- Asbestos values are in fibers/millileter

## **FIGURES**



Base map obtained from © DeLorme Topo North America™ 9.

0'  
2000'  
SCALE: 1" = 2000'

USGS QUADRANGLE(s) REFERENCED  
BIRMINGHAM (MI) TOPO QUAD - 1981



Jan 20, 2011 - 4:44pm - MANDRILA

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Indiana  
Michigan  
Ohio

Date	01-20-11
Drawn By	GM
Scale	1" = 2000'
Project	PE 54232D-08

**USGS 7.5 MINUTE TOPOGRAPHIC MAP**  
**30161 SOUTHFIELD ROAD**  
**SOUTHFIELD, MICHIGAN**

Figure No. 1

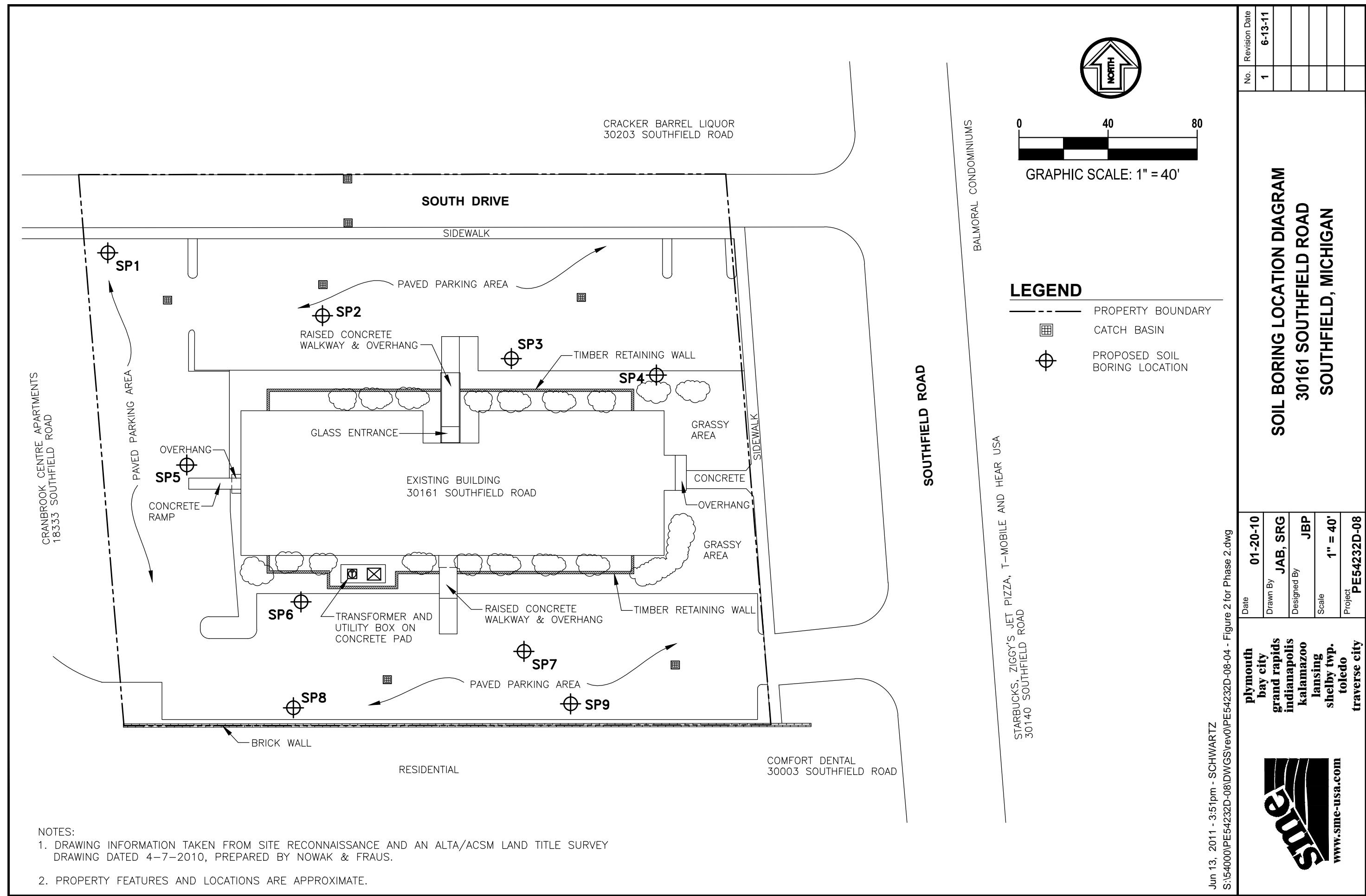


Figure No. 2

## **APPENDIX A**

### **SOIL BORING LOGS**



# soil and materials engineers, inc.

PROJECT NAME: 30161 SOUTHFIELD ROAD

A/E:

BORING SB1

PROJECT LOCATION: SOUTHFIELD, MICHIGAN

BY: SS

START: 05/12/2011

END: 05/12/2011

CLIENT:

PROJECT NUMBER: PE54232D-08

SHEET: 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS	
0		GROUND SURFACE ELEVATION= NOT SURVEYED						
0		Asphalt	S1	16	<1			
		Gravelly Medium to Coarse Sand- Brown (GP-SP/Fill)	S2	16	<1			
		Clayey Fine to Medium Sand- Trace Gravel- Trace Organics- Black-Moist (SC/Fill)	S3	14	<1			
		Clay with Trace Organics- Gray (CL/Fill)	S4	14	<1			
		Clay- Brown (CL/Fill)	S5	24	<1			
5		Medium Sand- Trace Clay- Light Brown- Moist (SP/Fill)	S6	24	<1			
		Medium to Coarse Sand- Trace Gravel- Trace Brick Fragments- Light Brown- Moist (SP/Fill)	S7	24	<1			
		Fine Sand- Trace Gravel- Light Brown- Moist (SP)	S8	24	<1			
10								
10		Fine Sand- Brown and Gray- Wet at 8.75 Feet (SP)						
15								
15		Silt- Trace Sand- Brown- Wet (ML)						
		END OF BORING AT 16 FEET						
20								
25								
30								
35								
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. A TEMPORARY MONITORING WELL SCREEN WAS INSTALLED FROM 8 TO 13 FEET BELOW GRADE AND A GROUNDWATER SAMPLE WAS COLLECTED. 3. NO ODORS NOTED AND NO STAINING OBSERVED.						
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING								

DRILLER: SME

WATER LEVEL DURING DRILLING: 8.75

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

PROJECT NAME: 30161 SOUTHFIELD ROAD

A/E:

BORING SB2

PROJECT LOCATION: SOUTHFIELD, MICHIGAN

BY: SS

START: 05/12/2011

END: 05/12/2011

CLIENT:

PROJECT NUMBER: PE54232D-08

SHEET: 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS
0		GROUND SURFACE ELEVATION= NOT SURVEYED					
0		Asphalt Clay- Trace Medium Sand- Trace Glass Shards- Brown- Dry (CL/Fill)	S1	18	<1		
0		Medium to Coarse Sand- Trace Gravel- Trace Brick Fragments- Brown- Dry (SP/ Fill)	S2	18	<1		
5		Medium to Coarse Sand- Trace Gravel- Brown- Moist (SP)	S3	16	<1		
5			S4	16	<1		
7			S5	24	<1		
7			S6	24	<1		
10		Fine to Medium Sand- Trace Gravel Brown- Wet at 9 Feet (SP)	S7	24	<1		
10			S8	24	<1		
15		Silty Fine Sand- Brown- Wet (SM)					
15		END OF BORING AT 16 FEET					
20							
25							
30							
35							
WATER LEVEL OBSERVATIONS							
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. NO ODORS NOTED AND NO STAINING OBSERVED.					

DRILLER: SME

WATER LEVEL DURING DRILLING: 9

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

PROJECT NAME: 30161 SOUTHFIELD ROAD

A/E:

BORING SB3

PROJECT LOCATION: SOUTHFIELD, MICHIGAN

BY: SS

START: 05/12/2011

END: 05/12/2011

CLIENT:

PROJECT NUMBER: PE54232D-08

SHEET: 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS	
0		GROUND SURFACE ELEVATION= NOT SURVEYED						
0	X	Asphalt Gravelly Medium to Coarse Sand- Trace Clay- Trace Recycled Concrete-Brown (GP-SP/Fill) Fine to Medium Sand- Trace Gravel- Trace Clay- Trace Brick Fragments-Brown- Moist (SP/Fill)	S1	12	<1			
5	X	Fine to Medium Sand- Trace Gravel- Trace Clay- Trace Cinders- Trace Brick Fragments- Brown- Moist (SP/Fill)	S2	12	<1			
	X	Crushed Concrete (Fill)	S3	12	<1			
	X	Fine to Medium Sand- Light Brown- Moist (SP)	S4	12	<1			
10		Fine to Medium Sand- Brown- Wet at 9 Feet (SP)	S5	17	<1			
15		Clay- Brown END OF BORING AT 16 FEET	S6	17	<1			
20			S7	24	<1			
25			S8	24	<1			
30								
35								
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. A TEMPORARY MONITORING WELL SCREEN WAS INSTALLED FROM 8 TO 13 FEET BELOW GRADE AND A GROUNDWATER SAMPLE WAS COLLECTED. 3. NO ODORS NOTED AND NO STAINING OBSERVED.						
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING								

DRILLER: SME

WATER LEVEL DURING DRILLING: 9

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

PROJECT NAME: 30161 SOUTHFIELD ROAD

A/E:

BORING SB4

PROJECT LOCATION: SOUTHFIELD, MICHIGAN

BY: SS

START: 05/12/2011

END: 05/12/2011

CLIENT:

PROJECT NUMBER: PE54232D-08

SHEET: 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS	
0		GROUND SURFACE ELEVATION= NOT SURVEYED						
0	X	Topsoil	S1	16	<1			
		Sandy Clay- Trace Gravel- Trace Brick Fragments- Brown (SC/Fill)	S2	16	<1			
		Fine to Medium Sand- Trace Gravel- Trace Clay- Trace Brick Fragments- Brown- Moist (SP/Fill)	S3	12	<1			
5			S4	12	<1			
			S5	24	<1			
			S6	24	<1			
			S7	24	<1			
10		Medium Sand- Brown- Moist- Wet at 8.5 Feet (SP)	S8	24	<1			
15		Fine Sand- Brown- Wet (SP)						
		Clay- Trace Sand- Brown and Gray (CL)						
		END OF BORING AT 16 FEET						
20								
25								
30								
35								
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. NO ODORS NOTED AND NO STAINING OBSERVED.						
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING								

DRILLER: SME

WATER LEVEL DURING DRILLING: 8.5

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

PROJECT NAME: 30161 SOUTHFIELD ROAD

A/E:

BORING SB5

PROJECT LOCATION: SOUTHFIELD, MICHIGAN

BY: SS

START: 05/12/2011

END: 05/12/2011

CLIENT:

PROJECT NUMBER: PE54232D-08

SHEET: 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS	
0		GROUND SURFACE ELEVATION= NOT SURVEYED						
0		Asphalt	S1	18	<1			
		Gravelly Medium to Coarse Sand- Brown (GP-SP/Fill)	S2	18	<1			
		Fine to Medium Sand- Trace Gravel- Trace Organics- Dark Brown (SP/ Fill)	S3	18	<1			
		Fine to Medium Sand- Trace Clay- Trace Organics Trace Cinders- Black- Moist (SP/Fill)	S4	18	<1			
		Fine to Medium Sand- Trace Gravel- Trace Clay- Brown- Moist (SP/Fill)	S5	24	<1			
5		Fine to Medium Sand- Trace Gravel- Brown- Moist (SP)	S6	24	<1			
10		Fine to Medium Sand- Light Brown- Wet at 9.5 Feet (SP)	S7	24	<1			
15		END OF BORING AT 16 FEET	S8	12	<1			
20								
25								
30								
35								
WATER LEVEL OBSERVATIONS								
▼ GROUNDWATER ENCOUNTERED DURING DRILLING		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. A TEMPORARY MONITORING WELL SCREEN WAS INSTALLED FROM 8.5 TO 13.5 FEET BELOW GRADE AND A GROUNDWATER SAMPLE WAS COLLECTED. 3. NO ODORS NOTED AND NO STAINING OBSERVED.						
▽ GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING								

DRILLER: SME

WATER LEVEL DURING DRILLING: 9.5

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

PROJECT NAME: 30161 SOUTHFIELD ROAD

A/E:

BORING SB6

PROJECT LOCATION: SOUTHFIELD, MICHIGAN

BY: SS

START: 05/12/2011

END: 05/12/2011

CLIENT:

PROJECT NUMBER: PE54232D-08

SHEET: 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS	
0		GROUND SURFACE ELEVATION= NOT SURVEYED						
0		Asphalt						
		Medium to Coarse Sand- Trace Slag Fragments- Brown (SP/Fill)						
		Medium Sand- Trace Gravel- Trace Clay- Brown- Moist (SP/Fill)						
5		Medium to Coarse Sand- Trace Gravel- Light Brown- Moist (SP/Fill)						
10		Clayey Fine to Medium Sand- Trace Slag Fragments- Light Brown (SC/ Fill)						
		Medium to Coarse Sand- Light Brown- Wet at 9.5 Feet (SP)						
15		Fine to Medium Sand- Black and Brown- Wet (SP)						
		Clay- Brown (CL)						
		END OF BORING AT 16 FEET						
20								
25								
30								
35								
WATER LEVEL OBSERVATIONS								
▼ GROUNDWATER ENCOUNTERED DURING DRILLING		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. A TEMPORARY MONITORING WELL SCREEN WAS INSTALLED FROM 8 TO 13 FEET BELOW GRADE AND A GROUNDWATER SAMPLE WAS COLLECTED. 3. NO ODORS NOTED AND NO STAINING OBSERVED.						
▽ GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING								

DRILLER: SME

WATER LEVEL DURING DRILLING: 9.5

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

PROJECT NAME: 30161 SOUTHFIELD ROAD

A/E:

BORING SB7

PROJECT LOCATION: SOUTHFIELD, MICHIGAN

BY: SS

START: 05/12/2011

END: 05/12/2011

CLIENT:

PROJECT NUMBER: PE54232D-08

SHEET: 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS	
0		GROUND SURFACE ELEVATION= NOT SURVEYED						
0		Asphalt	S1	16	<1			
		Clay- Trace Fine Sand- Brown (CL/Fill)	S2	16	<1			
		Clayey Fine to Medium Sand- Trace Gravel- Brown- Moist (SC/Fill)	S3	18	<1			
		Medium to Coarse Sand- Trace Gravel- Black (SP/Fill)	S4	18	<1			
5		Medium to Coarse Sand- Trace Gravel- Brown- Moist (SP/Fill)	S5	18	<1			
6.5		Clay- Trace Gravel- Trace Organics 6 to 6.5 Feet- Brown (CL/Fill)	S6	18	<1			
7		Clayey Fine Sand- Brown (SC/Fill)	S7	24	<1			
9.5		Fine to Medium Sand- Light Brown- Wet at 9.5 Feet (SP)	S8	24	<1			
10		Fine to Medium Sand- Trace Clay- Light Brown- Wet (SP)						
15		Clay- Brown (CL)						
		END OF BORING AT 16 FEET						
20								
25								
30								
35								
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. A TEMPORARY MONITORING WELL SCREEN WAS INSTALLED FROM 8.5 TO 13.5 FEET BELOW GRADE AND A GROUNDWATER SAMPLE WAS COLLECTED. 3. NO ODORS NOTED AND NO STAINING OBSERVED.						
▼ GROUNDWATER ENCOUNTERED DURING DRILLING								
▽ GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING								

DRILLER: SME

WATER LEVEL DURING DRILLING: 9.5

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

PROJECT NAME: 30161 SOUTHFIELD ROAD

A/E:

BORING SB8

PROJECT LOCATION: SOUTHFIELD, MICHIGAN

BY: SS

START: 05/12/2011

END: 05/12/2011

CLIENT:

PROJECT NUMBER: PE54232D-08

SHEET: 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS
0		GROUND SURFACE ELEVATION= NOT SURVEYED					
		Asphalt					
		Gravelly Medium to Coarse Sand- Trace Clay- Brown (GP-SP/Fill)					
		Medium Sand- Gravel- Trace Clay- Brown- Moist (SP/Fill)					
		Clay- Trace Sand- Trace Gravel- Brown (CL/Fill)					
		Fine to Medium Sand- Trace Gravel- Brown- Moist (SP)					
		END OF BORING AT 4 FEET					
5							
10							
15							
20							
25							
30							
35							
WATER LEVEL OBSERVATIONS							
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING		<b>Notes:</b> 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. GROUNDWATER WAS NOT ENCOUNTERED. 3. NO ODORS NOTED AND NO STAINING OBSERVED.					

DRILLER: SME

WATER LEVEL DURING DRILLING:

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS



# soil and materials engineers, inc.

PROJECT NAME: 30161 SOUTHFIELD ROAD

A/E:

BORING SB9

PROJECT LOCATION: SOUTHFIELD, MICHIGAN

BY: SS

START: 05/12/2011

END: 05/12/2011

CLIENT:

PROJECT NUMBER: PE54232D-08

SHEET: 1

DEPTH (FEET)	SYMBOLIC PROFILE	PROFILE DESCRIPTION	SAMPLE TYPE/NUMBER INTERVAL	SAMPLE RECOVERY	PID (ppm)	ANALYTICAL SAMPLE	FIELD OBSERVATIONS
0		GROUND SURFACE ELEVATION= NOT SURVEYED					
0	Asphalt						
	Gravelly Medium to Coarse Sand- Trace Clay- Brown (GP-SP/Fill)		S1	19	<1		
	Clay- Trace Sand- Trace Gravel- Dark Brown (CL/Fill)		S2	19	<1		
	Fine to Medium Sand- Trace Gravel- Trace Clay- Brown- Moist (SP)						
5	END OF BORING AT 4 FEET						
10							
15							
20							
25							
30							
35							
WATER LEVEL OBSERVATIONS		Notes: 1. THE INDICATED STRATIFICATION LINES ARE APPROXIMATE. IN SITU, THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL. 2. GROUNDWATER WAS NOT ENCOUNTERED. 3. NO ODORS NOTED AND NO STAINING OBSERVED.					
GROUNDWATER ENCOUNTERED DURING DRILLING GROUNDWATER ENCOUNTERED UPON COMPLETION OF DRILLING							

DRILLER: SME

WATER LEVEL DURING DRILLING:

DRILL METHOD: DIRECT PUSH

BACKFILL METHOD: SOIL CUTTINGS

**APPENDIX B**

**LABORATORY CHEMICAL ANALYSIS REPORTS**

Monday, May 23, 2011

Fibertec Project Number: 44577  
Project Identification: 30161 Southfield Rd. /PE54232D-08  
Submittal Date: 05/16/2011

Mr. Jeremy Efros  
Soil and Materials Engineers, Inc. - Plymouth  
43980 Plymouth Oaks  
Plymouth, MI 48170

Dear Mr. Efros,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



Daryl P. Strandbergh  
Laboratory Director

DPS/kc

Enclosures



**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-001**

Order: 44577  
Page: 2 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB1-S1</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>10</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>12:00</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Dry Weight Determination (ASTM D 2974-87)</b>						<b>Aliquot ID: 44577-001A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: BMG</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	<b>9.8</b>		%	0.1	1.0	05/17/11	MC110517	05/18/11	MC110517

<b>Michigan 10 Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)</b>						<b>Aliquot ID: 44577-001A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>4700</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
2. Barium	<b>40000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
3. Cadmium	<b>270</b>		µg/kg	50	20	05/18/11	PT11E18D	05/19/11	T211E19A
4. Chromium	<b>8900</b>		µg/kg	500	20	05/18/11	PT11E18D	05/19/11	T211E19A
5. Copper	<b>15000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
6. Lead	<b>52000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
7. Selenium	<b>320</b>		µg/kg	200	20	05/18/11	PT11E18D	05/19/11	T211E19A
8. Silver	U		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
9. Zinc	<b>50000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A

<b>Chromium, Hexavalent (EPA 3060A/EPA 7196A)</b>						<b>Aliquot ID: 44577-001A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: LRW</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/kg	2800	1.0	05/20/11	WF11E20A	05/23/11	WF11E20A

<b>Mercury by CVAAS (EPA 7471B)</b>						<b>Aliquot ID: 44577-001A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/kg	50	10	05/19/11	PM11E19D	05/20/11	M411E20B

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-001</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	05/18/11	V911E18A	05/18/11	V911E18A
2. Acrylonitrile	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
3. Benzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
4. Bromobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
5. Bromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
6. Bromodichloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
7. Bromoform	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
8. Bromomethane	U		µg/kg	200	1.0	05/18/11	V911E18A	05/18/11	V911E18A
9. 2-Butanone	U		µg/kg	750	1.0	05/18/11	V911E18A	05/18/11	V911E18A
10. n-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
11. sec-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
12. tert-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
13. Carbon Disulfide	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-001**

Order: 44577  
Page: 3 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB1-S1</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>10</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>12:00</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>				<b>Aliquot ID: 44577-001</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
14. Carbon Tetrachloride	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
15. Chlorobenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
16. Chloroethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
17. Chloroform	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
18. Chloromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
19. 2-Chlorotoluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
20. Dibromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/kg	11	1.0	05/18/11	V911E18A	05/18/11	V911E18A
22. Dibromomethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
28. 1,2-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
32. 1,2-Dichloropropane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
33. cis-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
35. Ethylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
36. Ethylene Dibromide	U		µg/kg	20	1.0	05/18/11	V911E18A	05/18/11	V911E18A
37. 2-Hexanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
38. Isopropylbenzene	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
39. Methyl Iodide	U		µg/kg	110	1.0	05/18/11	V911E18A	05/18/11	V911E18A
40. Methylene Chloride	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
42. MTBE	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
43. Naphthalene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
44. n-Propylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
45. Styrene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
48. Tetrachloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
49. Toluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
51. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
52. 1,1,2-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
53. Trichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-001**

Order: 44577  
Page: 4 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB1-S1</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>10</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>12:00</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>				<b>Aliquot ID: 44577-001</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
54. Trichlorofluoromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
59. Vinyl Chloride	U		µg/kg	40	1.0	05/18/11	V911E18A	05/18/11	V911E18A
60. Xylenes	U		µg/kg	150	1.0	05/18/11	V911E18A	05/18/11	V911E18A

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550C/EPA 8270C)</b>				<b>Aliquot ID: 44577-001A</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: HLS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
2. Acenaphthylene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
3. Anthracene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
4. Benzo(a)anthracene (SIM)	410		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
5. Benzo(a)pyrene (SIM)	340		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
6. Benzo(b)fluoranthene (SIM)	470		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
7. Benzo(ghi)perylene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
8. Benzo(k)fluoranthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
9. Chrysene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
11. Fluoranthene (SIM)	750		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
12. Fluorene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
15. Phenanthrene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
16. Pyrene (SIM)	550		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-005**

Order: 44577  
Page: 5 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB2-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>14</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>14:30</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Dry Weight Determination (ASTM D 2974-87)</b>						<b>Aliquot ID: 44577-005A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: BMG</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	<b>3.6</b>		%	0.1	1.0	05/17/11	MC110517	05/18/11	MC110517

<b>Michigan 10 Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)</b>						<b>Aliquot ID: 44577-005A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>3000</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
2. Barium	<b>5100</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
3. Cadmium	<b>54</b>		µg/kg	50	20	05/18/11	PT11E18D	05/19/11	T211E19A
4. Chromium	<b>3300</b>		µg/kg	500	20	05/18/11	PT11E18D	05/19/11	T211E19A
5. Copper	<b>7400</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
6. Lead	<b>2700</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
7. Selenium	<b>270</b>		µg/kg	200	20	05/18/11	PT11E18D	05/19/11	T211E19A
8. Silver	U		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
9. Zinc	<b>14000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A

<b>Chromium, Hexavalent (EPA 3060A/EPA 7196A)</b>						<b>Aliquot ID: 44577-005A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: LRW</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/kg	2600	1.0	05/20/11	WF11E20A	05/23/11	WF11E20A

<b>Mercury by CVAAS (EPA 7471B)</b>						<b>Aliquot ID: 44577-005A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/kg	50	10	05/19/11	PM11E19D	05/20/11	M411E20B

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-005</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	05/18/11	V911E18A	05/18/11	V911E18A
2. Acrylonitrile	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
3. Benzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
4. Bromobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
5. Bromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
6. Bromodichloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
7. Bromoform	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
8. Bromomethane	U		µg/kg	200	1.0	05/18/11	V911E18A	05/18/11	V911E18A
9. 2-Butanone	U		µg/kg	750	1.0	05/18/11	V911E18A	05/18/11	V911E18A
10. n-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
11. sec-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
12. tert-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
13. Carbon Disulfide	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB2-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>14</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>14:30</b>
<b>Sample Comments:</b> Soil results have been calculated and reported on a dry weight basis unless otherwise noted.					
<b>Definitions:</b> Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)				Aliquot ID: 44577-005		Matrix: Soil/Solid		Analyst: JAS	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
14. Carbon Tetrachloride	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
15. Chlorobenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
16. Chloroethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
17. Chloroform	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
18. Chloromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
19. 2-Chlorotoluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
20. Dibromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/kg	10	1.0	05/18/11	V911E18A	05/18/11	V911E18A
22. Dibromomethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
28. 1,2-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
32. 1,2-Dichloropropane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
33. cis-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
35. Ethylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
36. Ethylene Dibromide	U		µg/kg	20	1.0	05/18/11	V911E18A	05/18/11	V911E18A
37. 2-Hexanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
38. Isopropylbenzene	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
39. Methyl Iodide	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
40. Methylene Chloride	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
42. MTBE	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
43. Naphthalene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
44. n-Propylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
45. Styrene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
48. Tetrachloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
49. Toluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
51. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
52. 1,1,2-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
53. Trichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-005**

Order: 44577  
Page: 7 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB2-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>14</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>14:30</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>				<b>Aliquot ID: 44577-005</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
54. Trichlorofluoromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
57. 1,2,4-Trimethylbenzene	190		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
59. Vinyl Chloride	U		µg/kg	40	1.0	05/18/11	V911E18A	05/18/11	V911E18A
60. Xylenes	U		µg/kg	150	1.0	05/18/11	V911E18A	05/18/11	V911E18A

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550C/EPA 8270C)</b>				<b>Aliquot ID: 44577-005A</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
2. Acenaphthylene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
3. Anthracene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
4. Benzo(a)anthracene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
5. Benzo(a)pyrene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
6. Benzo(b)fluoranthene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
7. Benzo(ghi)perylene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
8. Benzo(k)fluoranthene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
9. Chrysene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
10. Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
11. Fluoranthene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
12. Fluorene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
13. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
14. 2-Methylnaphthalene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
15. Phenanthrene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B
16. Pyrene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S111E19B

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-006**

Order: 44577  
Page: 8 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>MS-SB2-S5</b>		Chain of Custody:	<b>108262</b>					
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>15</b>		Collect Date:	<b>05/12/11</b>					
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>		Collect Time:	<b>14:30</b>					
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>											
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.											

<b>Dry Weight Determination (ASTM D 2974-87)</b>				<b>Aliquot ID: 44577-006A</b>		<b>Matrix: Soil/Solid</b>		<b>Analyst: BMG</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	<b>7.1</b>		%	0.1	1.0	05/17/11	MC110517	05/18/11	MC110517

<b>Michigan 10 Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)</b>				<b>Aliquot ID: 44577-006A</b>		<b>Matrix: Soil/Solid</b>		<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>16000</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
2. Barium	<b>57000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
3. Cadmium	<b>10000</b>		µg/kg	50	20	05/18/11	PT11E18D	05/19/11	T211E19A
4. Chromium	<b>26000</b>		µg/kg	500	20	05/18/11	PT11E18D	05/19/11	T211E19A
5. Copper	<b>27000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
6. Lead	<b>25000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
7. Selenium	<b>11000</b>		µg/kg	200	20	05/18/11	PT11E18D	05/19/11	T211E19A
8. Silver	<b>9600</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
9. Zinc	<b>75000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A

<b>Chromium, Hexavalent (EPA 3060A/EPA 7196A)</b>				<b>Aliquot ID: 44577-006A</b>		<b>Matrix: Soil/Solid</b>		<b>Analyst: LRW</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	<b>36000</b>		µg/kg	2700	1.0	05/20/11	WF11E20A	05/23/11	WF11E20A

<b>Mercury by CVAAS (EPA 7471B)</b>				<b>Aliquot ID: 44577-006A</b>		<b>Matrix: Soil/Solid</b>		<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	<b>220</b>		µg/kg	50	10	05/19/11	PM11E19D	05/20/11	M411E20B

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>				<b>Aliquot ID: 44577-006</b>		<b>Matrix: Soil/Solid</b>		<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	<b>7000</b>		µg/kg	1000	1.0	05/18/11	V911E18A	05/18/11	V911E18A
2. Acrylonitrile	<b>7600</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
3. Benzene	<b>5300</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
4. Bromobenzene	<b>6100</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
5. Bromochloromethane	<b>5600</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
6. Bromodichloromethane	<b>5900</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
7. Bromoform	<b>6800</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
8. Bromomethane	<b>4400</b>		µg/kg	200	1.0	05/18/11	V911E18A	05/18/11	V911E18A
9. 2-Butanone	<b>5200</b>		µg/kg	750	1.0	05/18/11	V911E18A	05/18/11	V911E18A
10. n-Butylbenzene	<b>6500</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
11. sec-Butylbenzene	<b>6400</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
12. tert-Butylbenzene	<b>6500</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
13. Carbon Disulfide	<b>5300</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-006**

Order: 44577  
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Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>MS-SB2-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>15</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>14:30</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-006</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
14. Carbon Tetrachloride	<b>5300</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
15. Chlorobenzene	<b>5600</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
16. Chloroethane	<b>5000</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
17. Chloroform	<b>5100</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
18. Chloromethane	<b>4400</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
19. 2-Chlorotoluene	<b>6300</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
20. Dibromochloromethane	<b>6500</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
21. 1,2-Dibromo-3-chloropropane (NN)	<b>7200</b>		µg/kg	11	1.0	05/18/11	V911E18A	05/18/11	V911E18A
22. Dibromomethane	<b>5600</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
23. 1,2-Dichlorobenzene	<b>5800</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
24. 1,3-Dichlorobenzene	<b>5700</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
25. 1,4-Dichlorobenzene	<b>5400</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
26. Dichlorodifluoromethane	<b>4900</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
27. 1,1-Dichloroethane	<b>6100</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
28. 1,2-Dichloroethane	<b>11000</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
29. 1,1-Dichloroethene	<b>5400</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
30. cis-1,2-Dichloroethene	<b>6100</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
31. trans-1,2-Dichloroethene	<b>4900</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
32. 1,2-Dichloropropane	<b>5800</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
33. cis-1,3-Dichloropropene	<b>6400</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
34. trans-1,3-Dichloropropene	<b>6400</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
35. Ethylbenzene	<b>5700</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
36. Ethylene Dibromide	<b>12000</b>		µg/kg	20	1.0	05/18/11	V911E18A	05/18/11	V911E18A
37. 2-Hexanone	<b>7800</b>		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
38. Isopropylbenzene	<b>6200</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
39. Methyl Iodide	<b>4800</b>		µg/kg	110	1.0	05/18/11	V911E18A	05/18/11	V911E18A
40. Methylene Chloride	<b>5200</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
41. 4-Methyl-2-pentanone	<b>6700</b>		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
42. MTBE	<b>13000</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
43. Naphthalene	<b>6700</b>		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
44. n-Propylbenzene	<b>6500</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
45. Styrene	<b>6400</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
46. 1,1,1,2-Tetrachloroethane	<b>6100</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
47. 1,1,2,2-Tetrachloroethane	<b>6700</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
48. Tetrachloroethene	<b>5700</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
49. Toluene	<b>5400</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
50. 1,2,4-Trichlorobenzene	<b>5900</b>		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
51. 1,1,1-Trichloroethane	<b>5000</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
52. 1,1,2-Trichloroethane	<b>6100</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
53. Trichloroethene	<b>5500</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-006**

Order: 44577  
Page: 10 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>MS-SB2-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>15</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>14:30</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-006</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
54. Trichlorofluoromethane	<b>4900</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
55. 1,2,3-Trichloropropane	<b>6600</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
56. 1,2,3-Trimethylbenzene (NN)	<b>6100</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
57. 1,2,4-Trimethylbenzene	<b>6500</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
58. 1,3,5-Trimethylbenzene	<b>6400</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
59. Vinyl Chloride	<b>5700</b>		µg/kg	40	1.0	05/18/11	V911E18A	05/18/11	V911E18A
60. Xylenes	<b>18000</b>		µg/kg	150	1.0	05/18/11	V911E18A	05/18/11	V911E18A

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550C/EPA 8270C)</b>						<b>Aliquot ID: 44577-006A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: HLS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene (SIM)	<b>2700</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
2. Acenaphthylene (SIM)	<b>2700</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
3. Anthracene (SIM)	<b>2700</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
4. Benzo(a)anthracene (SIM)	<b>2700</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
5. Benzo(a)pyrene (SIM)	<b>2900</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
6. Benzo(b)fluoranthene (SIM)	<b>3000</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
7. Benzo(ghi)perylene (SIM)	<b>2700</b> J,V+		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
8. Benzo(k)fluoranthene (SIM)	<b>2900</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
9. Chrysene (SIM)	<b>2600</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
10. Dibenzo(a,h)anthracene (SIM)	<b>2900</b> J,V+		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
11. Fluoranthene (SIM)	<b>3200</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
12. Fluorene (SIM)	<b>2800</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
13. Indeno(1,2,3-cd)pyrene (SIM)	<b>2800</b> J,V+		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
14. 2-Methylnaphthalene (SIM)	<b>2200</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
15. Phenanthrene (SIM)	<b>2900</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
16. Pyrene (SIM)	<b>2900</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-007**

Order: 44577  
Page: 11 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>MSD-SB2-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>16</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>14:30</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Dry Weight Determination (ASTM D 2974-87)</b>						<b>Aliquot ID: 44577-007A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: BMG</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	<b>4.2</b>		%	0.1	1.0	05/17/11	MC110517	05/18/11	MC110517

<b>Michigan 10 Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)</b>						<b>Aliquot ID: 44577-007A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>13000</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
2. Barium	<b>51000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
3. Cadmium	<b>10000</b>		µg/kg	50	20	05/18/11	PT11E18D	05/19/11	T211E19A
4. Chromium	<b>23000</b>		µg/kg	500	20	05/18/11	PT11E18D	05/19/11	T211E19A
5. Copper	<b>24000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
6. Lead	<b>21000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
7. Selenium	<b>10000</b>		µg/kg	200	20	05/18/11	PT11E18D	05/19/11	T211E19A
8. Silver	<b>9700</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
9. Zinc	<b>60000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A

<b>Chromium, Hexavalent (EPA 3060A/EPA 7196A)</b>						<b>Aliquot ID: 44577-007A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: LRW</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	<b>32000</b>		µg/kg	2600	1.0	05/20/11	WF11E20A	05/23/11	WF11E20A

<b>Mercury by CVAAS (EPA 7471B)</b>						<b>Aliquot ID: 44577-007A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	<b>220</b>		µg/kg	50	10	05/19/11	PM11E19D	05/20/11	M411E20B

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-007</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	<b>7000</b>		µg/kg	1000	1.0	05/18/11	V911E18A	05/18/11	V911E18A
2. Acrylonitrile	<b>7500</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
3. Benzene	<b>4900</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
4. Bromobenzene	<b>5600</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
5. Bromochloromethane	<b>5100</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
6. Bromodichloromethane	<b>5400</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
7. Bromoform	<b>6500</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
8. Bromomethane	<b>4300</b>		µg/kg	200	1.0	05/18/11	V911E18A	05/18/11	V911E18A
9. 2-Butanone	<b>5000</b>		µg/kg	750	1.0	05/18/11	V911E18A	05/18/11	V911E18A
10. n-Butylbenzene	<b>6000</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
11. sec-Butylbenzene	<b>5900</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
12. tert-Butylbenzene	<b>6000</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
13. Carbon Disulfide	<b>5000</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-007**

Order: 44577  
Page: 12 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>MSD-SB2-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>16</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>14:30</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-007</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
14. Carbon Tetrachloride	<b>4900</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
15. Chlorobenzene	<b>5000</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
16. Chloroethane	<b>4500</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
17. Chloroform	<b>4600</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
18. Chloromethane	<b>4200</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
19. 2-Chlorotoluene	<b>5700</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
20. Dibromochloromethane	<b>6000</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
21. 1,2-Dibromo-3-chloropropane (NN)	<b>7000</b>		µg/kg	10	1.0	05/18/11	V911E18A	05/18/11	V911E18A
22. Dibromomethane	<b>5200</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
23. 1,2-Dichlorobenzene	<b>5300</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
24. 1,3-Dichlorobenzene	<b>5200</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
25. 1,4-Dichlorobenzene	<b>4900</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
26. Dichlorodifluoromethane	<b>4700</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
27. 1,1-Dichloroethane	<b>5600</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
28. 1,2-Dichloroethane	<b>9600</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
29. 1,1-Dichloroethene	<b>5000</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
30. cis-1,2-Dichloroethene	<b>5600</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
31. trans-1,2-Dichloroethene	<b>4500</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
32. 1,2-Dichloropropane	<b>5400</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
33. cis-1,3-Dichloropropene	<b>5800</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
34. trans-1,3-Dichloropropene	<b>5800</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
35. Ethylbenzene	<b>5200</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
36. Ethylene Dibromide	<b>11000</b>		µg/kg	20	1.0	05/18/11	V911E18A	05/18/11	V911E18A
37. 2-Hexanone	<b>7600</b>		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
38. Isopropylbenzene	<b>5700</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
39. Methyl Iodide	<b>4400</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
40. Methylene Chloride	<b>4700</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
41. 4-Methyl-2-pentanone	<b>6500</b>		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
42. MTBE	<b>12000</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
43. Naphthalene	<b>6400</b>		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
44. n-Propylbenzene	<b>5900</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
45. Styrene	<b>5900</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
46. 1,1,1,2-Tetrachloroethane	<b>5600</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
47. 1,1,2,2-Tetrachloroethane	<b>6300</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
48. Tetrachloroethene	<b>5200</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
49. Toluene	<b>5000</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
50. 1,2,4-Trichlorobenzene	<b>5500</b>		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
51. 1,1,1-Trichloroethane	<b>4600</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
52. 1,1,2-Trichloroethane	<b>5600</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
53. Trichloroethene	<b>5100</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-007**

Order: 44577  
Page: 13 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>MSD-SB2-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>16</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>14:30</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-007</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
54. Trichlorofluoromethane	<b>4600</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
55. 1,2,3-Trichloropropane	<b>6200</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
56. 1,2,3-Trimethylbenzene (NN)	<b>5600</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
57. 1,2,4-Trimethylbenzene	<b>5900</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
58. 1,3,5-Trimethylbenzene	<b>5900</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
59. Vinyl Chloride	<b>5400</b>		µg/kg	40	1.0	05/18/11	V911E18A	05/18/11	V911E18A
60. Xylenes	<b>16000</b>		µg/kg	150	1.0	05/18/11	V911E18A	05/18/11	V911E18A

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550C/EPA 8270C)</b>						<b>Aliquot ID: 44577-007A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: HLS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene (SIM)	<b>2800</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
2. Acenaphthylene (SIM)	<b>2800</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
3. Anthracene (SIM)	<b>2800</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
4. Benzo(a)anthracene (SIM)	<b>3000</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
5. Benzo(a)pyrene (SIM)	<b>3200</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
6. Benzo(b)fluoranthene (SIM)	<b>3500</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
7. Benzo(ghi)perylene (SIM)	<b>2700</b> J,V+		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
8. Benzo(k)fluoranthene (SIM)	<b>3100</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
9. Chrysene (SIM)	<b>2900</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
10. Dibenzo(a,h)anthracene (SIM)	<b>2800</b> J,V+		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
11. Fluoranthene (SIM)	<b>4300</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
12. Fluorene (SIM)	<b>2900</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
13. Indeno(1,2,3-cd)pyrene (SIM)	<b>2900</b> J,V+		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
14. 2-Methylnaphthalene (SIM)	<b>2400</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
15. Phenanthrene (SIM)	<b>3800</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
16. Pyrene (SIM)	<b>3700</b>		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-008**

Order: 44577  
Page: 14 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB4-S1</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>17</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>15:45</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Dry Weight Determination (ASTM D 2974-87)</b>						<b>Aliquot ID: 44577-008A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: BMG</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	<b>9.4</b>		%	0.1	1.0	05/17/11	MC110517	05/18/11	MC110517

<b>Michigan 10 Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)</b>						<b>Aliquot ID: 44577-008A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>4800</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
2. Barium	<b>37000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
3. Cadmium	<b>180</b>		µg/kg	50	20	05/18/11	PT11E18D	05/19/11	T211E19A
4. Chromium	<b>10000</b>		µg/kg	500	20	05/18/11	PT11E18D	05/19/11	T211E19A
5. Copper	<b>12000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
6. Lead	<b>20000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
7. Selenium	<b>270</b>		µg/kg	200	20	05/18/11	PT11E18D	05/19/11	T211E19A
8. Silver	U		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
9. Zinc	<b>45000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A

<b>Chromium, Hexavalent (EPA 3060A/EPA 7196A)</b>						<b>Aliquot ID: 44577-008A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: LRW</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/kg	2800	1.0	05/20/11	WF11E20A	05/23/11	WF11E20A

<b>Mercury by CVAAS (EPA 7471B)</b>						<b>Aliquot ID: 44577-008A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	<b>70</b>		µg/kg	50	10	05/19/11	PM11E19D	05/20/11	M411E20B

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-008</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	05/18/11	V911E18A	05/18/11	V911E18A
2. Acrylonitrile	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
3. Benzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
4. Bromobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
5. Bromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
6. Bromodichloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
7. Bromoform	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
8. Bromomethane	U		µg/kg	200	1.0	05/18/11	V911E18A	05/18/11	V911E18A
9. 2-Butanone	U		µg/kg	750	1.0	05/18/11	V911E18A	05/18/11	V911E18A
10. n-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
11. sec-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
12. tert-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
13. Carbon Disulfide	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB4-S1</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>17</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>15:45</b>
<b>Sample Comments:</b> Soil results have been calculated and reported on a dry weight basis unless otherwise noted.					
<b>Definitions:</b> Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)				Aliquot ID: 44577-008		Matrix: Soil/Solid		Analyst: JAS	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
14. Carbon Tetrachloride	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
15. Chlorobenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
16. Chloroethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
17. Chloroform	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
18. Chloromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
19. 2-Chlorotoluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
20. Dibromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/kg	11	1.0	05/18/11	V911E18A	05/18/11	V911E18A
22. Dibromomethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
28. 1,2-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
32. 1,2-Dichloropropane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
33. cis-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
35. Ethylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
36. Ethylene Dibromide	U		µg/kg	20	1.0	05/18/11	V911E18A	05/18/11	V911E18A
37. 2-Hexanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
38. Isopropylbenzene	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
39. Methyl Iodide	U		µg/kg	110	1.0	05/18/11	V911E18A	05/18/11	V911E18A
40. Methylene Chloride	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
42. MTBE	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
43. Naphthalene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
44. n-Propylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
45. Styrene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
48. Tetrachloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
49. Toluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
51. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
52. 1,1,2-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
53. Trichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-008**

Order: 44577  
Page: 16 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB4-S1</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>17</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>15:45</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>				<b>Aliquot ID: 44577-008</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
54. Trichlorofluoromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
59. Vinyl Chloride	U		µg/kg	40	1.0	05/18/11	V911E18A	05/18/11	V911E18A
60. Xylenes	U		µg/kg	150	1.0	05/18/11	V911E18A	05/18/11	V911E18A

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550C/EPA 8270C)</b>				<b>Aliquot ID: 44577-008A</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: HLS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
2. Acenaphthylene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
3. Anthracene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
4. Benzo(a)anthracene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
5. Benzo(a)pyrene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
6. Benzo(b)fluoranthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
7. Benzo(ghi)perylene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
8. Benzo(k)fluoranthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
9. Chrysene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
11. Fluoranthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
12. Fluorene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
15. Phenanthrene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B
16. Pyrene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/19/11	S711E19B

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-009**

Order: 44577  
Page: 17 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB5-S2</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>18</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>11:00</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Dry Weight Determination (ASTM D 2974-87)</b>						<b>Aliquot ID: 44577-009A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: BMG</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	<b>9.5</b>		%	0.1	1.0	05/17/11	MC110517	05/18/11	MC110517

<b>Michigan 10 Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)</b>						<b>Aliquot ID: 44577-009A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>1900</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
2. Barium	<b>13000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
3. Cadmium	<b>70</b>		µg/kg	50	20	05/18/11	PT11E18D	05/19/11	T211E19A
4. Chromium	<b>6000</b>		µg/kg	500	20	05/18/11	PT11E18D	05/19/11	T211E19A
5. Copper	<b>2800</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
6. Lead	<b>3300</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
7. Selenium	<b>U</b>		µg/kg	200	20	05/18/11	PT11E18D	05/19/11	T211E19A
8. Silver	<b>U</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
9. Zinc	<b>11000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A

<b>Chromium, Hexavalent (EPA 3060A/EPA 7196A)</b>						<b>Aliquot ID: 44577-009A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: LRW</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	<b>U</b>		µg/kg	2800	1.0	05/20/11	WF11E20A	05/23/11	WF11E20A

<b>Mercury by CVAAS (EPA 7471B)</b>						<b>Aliquot ID: 44577-009A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	<b>U</b>		µg/kg	50	10	05/19/11	PM11E19D	05/20/11	M411E20B

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-009</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	<b>U</b>		µg/kg	1000	1.0	05/18/11	V911E18A	05/18/11	V911E18A
2. Acrylonitrile	<b>U</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
3. Benzene	<b>U</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
4. Bromobenzene	<b>U</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
5. Bromochloromethane	<b>U</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
6. Bromodichloromethane	<b>U</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
7. Bromoform	<b>U</b>		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
8. Bromomethane	<b>U</b>		µg/kg	200	1.0	05/18/11	V911E18A	05/18/11	V911E18A
9. 2-Butanone	<b>U</b>		µg/kg	750	1.0	05/18/11	V911E18A	05/18/11	V911E18A
10. n-Butylbenzene	<b>U</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
11. sec-Butylbenzene	<b>U</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
12. tert-Butylbenzene	<b>U</b>		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
13. Carbon Disulfide	<b>U</b>		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB5-S2</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>18</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>11:00</b>
<b>Sample Comments:</b> Soil results have been calculated and reported on a dry weight basis unless otherwise noted.					
<b>Definitions:</b> Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)				Aliquot ID: 44577-009		Matrix: Soil/Solid		Analyst: JAS	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
14. Carbon Tetrachloride	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
15. Chlorobenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
16. Chloroethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
17. Chloroform	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
18. Chloromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
19. 2-Chlorotoluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
20. Dibromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/kg	11	1.0	05/18/11	V911E18A	05/18/11	V911E18A
22. Dibromomethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
28. 1,2-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
32. 1,2-Dichloropropane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
33. cis-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
35. Ethylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
36. Ethylene Dibromide	U		µg/kg	20	1.0	05/18/11	V911E18A	05/18/11	V911E18A
37. 2-Hexanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
38. Isopropylbenzene	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
39. Methyl Iodide	U		µg/kg	110	1.0	05/18/11	V911E18A	05/18/11	V911E18A
40. Methylene Chloride	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
42. MTBE	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
43. Naphthalene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
44. n-Propylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
45. Styrene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
48. Tetrachloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
49. Toluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
51. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
52. 1,1,2-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
53. Trichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-009**

Order: 44577  
Page: 19 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB5-S2</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>18</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>11:00</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>				<b>Aliquot ID: 44577-009</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
54. Trichlorofluoromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
59. Vinyl Chloride	U		µg/kg	40	1.0	05/18/11	V911E18A	05/18/11	V911E18A
60. Xylenes	U		µg/kg	150	1.0	05/18/11	V911E18A	05/18/11	V911E18A

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550C/EPA 8270C)</b>				<b>Aliquot ID: 44577-009A</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
2. Acenaphthylene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
3. Anthracene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
4. Benzo(a)anthracene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
5. Benzo(a)pyrene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
6. Benzo(b)fluoranthene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
7. Benzo(ghi)perylene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
8. Benzo(k)fluoranthene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
9. Chrysene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
10. Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
11. Fluoranthene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
12. Fluorene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
13. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
14. 2-Methylnaphthalene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
15. Phenanthrene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A
16. Pyrene	U		µg/kg	330	1.0	05/18/11	PS11E18F	05/20/11	S311E19A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-010**

Order: 44577  
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Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB6-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>19</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>10:00</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Dry Weight Determination (ASTM D 2974-87)</b>						<b>Aliquot ID: 44577-010A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: BMG</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	<b>5.2</b>		%	0.1	1.0	05/17/11	MC110517	05/18/11	MC110517

<b>Michigan 10 Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)</b>						<b>Aliquot ID: 44577-010A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>1800</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
2. Barium	<b>20000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
3. Cadmium	<b>75</b>		µg/kg	50	20	05/18/11	PT11E18D	05/19/11	T211E19A
4. Chromium	<b>5100</b>		µg/kg	500	20	05/18/11	PT11E18D	05/19/11	T211E19A
5. Copper	<b>5400</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
6. Lead	<b>5300</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
7. Selenium	<b>290</b>		µg/kg	200	20	05/18/11	PT11E18D	05/19/11	T211E19A
8. Silver	U		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
9. Zinc	<b>20000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A

<b>Chromium, Hexavalent (EPA 3060A/EPA 7196A)</b>						<b>Aliquot ID: 44577-010A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: LRW</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/kg	2600	1.0	05/20/11	WF11E20A	05/23/11	WF11E20A

<b>Mercury by CVAAS (EPA 7471B)</b>						<b>Aliquot ID: 44577-010A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/kg	50	10	05/19/11	PM11E19D	05/20/11	M411E20B

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-010</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	05/18/11	V911E18A	05/18/11	V911E18A
2. Acrylonitrile	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
3. Benzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
4. Bromobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
5. Bromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
6. Bromodichloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
7. Bromoform	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
8. Bromomethane	U		µg/kg	200	1.0	05/18/11	V911E18A	05/18/11	V911E18A
9. 2-Butanone	U		µg/kg	750	1.0	05/18/11	V911E18A	05/18/11	V911E18A
10. n-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
11. sec-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
12. tert-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
13. Carbon Disulfide	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB6-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>19</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>10:00</b>
<b>Sample Comments:</b> Soil results have been calculated and reported on a dry weight basis unless otherwise noted.					
<b>Definitions:</b> Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)				Aliquot ID: 44577-010		Matrix: Soil/Solid		Analyst: JAS	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
14. Carbon Tetrachloride	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
15. Chlorobenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
16. Chloroethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
17. Chloroform	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
18. Chloromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
19. 2-Chlorotoluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
20. Dibromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/kg	11	1.0	05/18/11	V911E18A	05/18/11	V911E18A
22. Dibromomethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
28. 1,2-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
32. 1,2-Dichloropropane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
33. cis-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
35. Ethylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
36. Ethylene Dibromide	U		µg/kg	20	1.0	05/18/11	V911E18A	05/18/11	V911E18A
37. 2-Hexanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
38. Isopropylbenzene	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
39. Methyl Iodide	U		µg/kg	110	1.0	05/18/11	V911E18A	05/18/11	V911E18A
40. Methylene Chloride	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
42. MTBE	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
43. Naphthalene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
44. n-Propylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
45. Styrene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
48. Tetrachloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
49. Toluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
51. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
52. 1,1,2-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
53. Trichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-010**

Order: 44577  
Page: 22 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB6-S5</b>	Chain of Custody:	<b>108262</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>19</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>10:00</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>				<b>Aliquot ID: 44577-010</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
54. Trichlorofluoromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
59. Vinyl Chloride	U		µg/kg	40	1.0	05/18/11	V911E18A	05/18/11	V911E18A
60. Xylenes	U		µg/kg	150	1.0	05/18/11	V911E18A	05/18/11	V911E18A

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550C/EPA 8270C)</b>				<b>Aliquot ID: 44577-010A</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: HLS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
2. Acenaphthylene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
3. Anthracene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
4. Benzo(a)anthracene (SIM)	600		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
5. Benzo(a)pyrene (SIM)	630		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
6. Benzo(b)fluoranthene (SIM)	830		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
7. Benzo(ghi)perylene (SIM)	440		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
8. Benzo(k)fluoranthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
9. Chrysene (SIM)	580		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
11. Fluoranthene (SIM)	1200		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
12. Fluorene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
13. Indeno(1,2,3-cd)pyrene (SIM)	450		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
15. Phenanthrene (SIM)	860		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A
16. Pyrene (SIM)	990		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E20A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-011**

Order: 44577  
Page: 23 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB8-S2</b>	Chain of Custody:	<b>108263</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>20</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>08:25</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

**Dry Weight Determination (ASTM D 2974-87)**      **Aliquot ID: 44577-011**      **Matrix: Soil/Solid**      **Analyst: BMG**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	12		%	0.1	1.0	05/17/11	MC110517	05/18/11	MC110517

**Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)**      **Aliquot ID: 44577-011**      **Matrix: Soil/Solid**      **Analyst: JLH**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	7100		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
2. Cadmium	250		µg/kg	50	20	05/18/11	PT11E18D	05/19/11	T211E19A
3. Lead	38000		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A

**Mercury by CVAAS (EPA 7471B)**      **Aliquot ID: 44577-011**      **Matrix: Soil/Solid**      **Analyst: MAP**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/kg	50	10	05/19/11	PM11E19D	05/20/11	M411E20B

**Organochlorine Pesticides (EPA 3550C/EPA 8081B)**      **Aliquot ID: 44577-011**      **Matrix: Soil/Solid**      **Analyst: GAN**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
2. alpha-BHC (NN)	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
3. beta-BHC (NN)	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
4. delta-BHC	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
5. gamma-BHC (NN)	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
6. Chlordane (NN)	U		µg/kg	28	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
7. 4,4'-DDD	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
8. 4,4'-DDE	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
9. 4,4'-DDT	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
10. Dieldrin	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
11. Endosulfan I	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
12. Endosulfan II	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
13. Endosulfan Sulfate	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
14. Endrin	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
15. Endrin Aldehyde	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
16. Heptachlor	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
17. Heptachlor Epoxide	U		µg/kg	23	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
18. Methoxychlor	U		µg/kg	57	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
19. Toxaphene (NN)	U		µg/kg	190	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A

**Organochlorine Herbicides (EPA 3550C/EPA 8151A)**      **Aliquot ID: 44577-011**      **Matrix: Soil/Solid**      **Analyst: TMC**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. 2,4-D	U		µg/kg	230	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-011**

Order: 44577  
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Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB8-S2</b>	Chain of Custody:	<b>108263</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>20</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>08:25</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Organochlorine Herbicides (EPA 3550C/EPA 8151A)</b>		<b>Aliquot ID: 44577-011</b>			<b>Matrix: Soil/Solid</b>		<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
2. Dalapon	U		µg/kg	110	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
3. 2,4-DB	U		µg/kg	230	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
4. Dicamba	U		µg/kg	110	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
5. Dichlorprop (NN)	U		µg/kg	230	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
6. Dinoseb (NN)	U		µg/kg	110	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
7. 2,4,5-T	U		µg/kg	230	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
8. 2,4,5-TP (NN)	U		µg/kg	230	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B

<b>Cyanide, Total (CLP ISM01.2/EPA 9014)</b>		<b>Aliquot ID: 44577-011</b>			<b>Matrix: Soil/Solid</b>		<b>Analyst: DMS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Cyanide	U		µg/kg	200	1.0	05/18/11	PW11E18B	05/18/11	WP11E18B

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-012**

Order: 44577  
Page: 25 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB9-S1</b>	Chain of Custody:	<b>108263</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>21</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>07:50</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

**Dry Weight Determination (ASTM D 2974-87)**      **Aliquot ID: 44577-012**      **Matrix: Soil/Solid**      **Analyst: BMG**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	<b>11</b>		%	0.1	1.0	05/17/11	MC110517	05/18/11	MC110517

**Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)**      **Aliquot ID: 44577-012**      **Matrix: Soil/Solid**      **Analyst: JLH**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>6200</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
2. Cadmium	<b>130</b>		µg/kg	50	20	05/18/11	PT11E18D	05/19/11	T211E19A
3. Lead	<b>14000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A

**Mercury by CVAAS (EPA 7471B)**      **Aliquot ID: 44577-012**      **Matrix: Soil/Solid**      **Analyst: MAP**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	<b>U</b>		µg/kg	50	10	05/19/11	PM11E19D	05/20/11	M411E20B

**Organochlorine Pesticides (EPA 3550C/EPA 8081B)**      **Aliquot ID: 44577-012**      **Matrix: Soil/Solid**      **Analyst: GAN**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
2. alpha-BHC (NN)	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
3. beta-BHC (NN)	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
4. delta-BHC	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
5. gamma-BHC (NN)	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
6. Chlordane (NN)	<b>U</b>		µg/kg	28	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
7. 4,4'-DDD	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
8. 4,4'-DDE	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
9. 4,4'-DDT	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
10. Dieldrin	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
11. Endosulfan I	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
12. Endosulfan II	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
13. Endosulfan Sulfate	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
14. Endrin	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
15. Endrin Aldehyde	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
16. Heptachlor	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
17. Heptachlor Epoxide	<b>U</b>		µg/kg	22	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
18. Methoxychlor	<b>U</b>		µg/kg	56	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A
19. Toxaphene (NN)	<b>U</b>		µg/kg	190	1.0	05/19/11	PS11E19D	05/20/11	SA11E19A

**Organochlorine Herbicides (EPA 3550C/EPA 8151A)**      **Aliquot ID: 44577-012**      **Matrix: Soil/Solid**      **Analyst: TMC**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. 2,4-D	<b>U</b>		µg/kg	220	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B

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8660 S. Mackinaw Trail      Cadillac, MI 49601      T: (231) 775-8368      F: (231) 775-8584



**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-012**

Order: 44577  
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Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB9-S1</b>	Chain of Custody:	<b>108263</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>21</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>07:50</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Organochlorine Herbicides (EPA 3550C/EPA 8151A)</b>		<b>Aliquot ID: 44577-012</b>			<b>Matrix: Soil/Solid</b>		<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
2. Dalapon	U		µg/kg	110	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
3. 2,4-DB	U		µg/kg	220	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
4. Dicamba	U		µg/kg	110	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
5. Dichlorprop (NN)	U		µg/kg	220	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
6. Dinoseb (NN)	U		µg/kg	110	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
7. 2,4,5-T	U		µg/kg	220	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B
8. 2,4,5-TP (NN)	U		µg/kg	220	1.0	05/19/11	PS11E19E	05/20/11	SC11E19B

<b>Cyanide, Total (CLP ISM01.2/EPA 9014)</b>		<b>Aliquot ID: 44577-012</b>			<b>Matrix: Soil/Solid</b>		<b>Analyst: DMS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Cyanide	U		µg/kg	200	1.0	05/18/11	PW11E18B	05/18/11	WP11E18B

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-013**

Order: 44577  
Page: 27 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>Dup</b>	Chain of Custody:	<b>108263</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>22</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>NA</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Dry Weight Determination (ASTM D 2974-87)</b>						<b>Aliquot ID: 44577-013A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: BMG</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	<b>8.5</b>		%	0.1	1.0	05/17/11	MC110517	05/18/11	MC110517

<b>Michigan 10 Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)</b>						<b>Aliquot ID: 44577-013A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>4400</b>		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
2. Barium	<b>34000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
3. Cadmium	<b>210</b>		µg/kg	50	20	05/18/11	PT11E18D	05/19/11	T211E19A
4. Chromium	<b>10000</b>		µg/kg	500	20	05/18/11	PT11E18D	05/19/11	T211E19A
5. Copper	<b>11000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
6. Lead	<b>34000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A
7. Selenium	<b>280</b>		µg/kg	200	20	05/18/11	PT11E18D	05/19/11	T211E19A
8. Silver	U		µg/kg	100	20	05/18/11	PT11E18D	05/19/11	T211E19A
9. Zinc	<b>52000</b>		µg/kg	1000	20	05/18/11	PT11E18D	05/19/11	T211E19A

<b>Chromium, Hexavalent (EPA 3060A/EPA 7196A)</b>						<b>Aliquot ID: 44577-013A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: LRW</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/kg	2700	1.0	05/20/11	WF11E20A	05/23/11	WF11E20A

<b>Mercury by CVAAS (EPA 7471B)</b>						<b>Aliquot ID: 44577-013A</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/kg	50	10	05/19/11	PM11E19D	05/20/11	M411E20B

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-013</b>	<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	05/18/11	V911E18A	05/18/11	V911E18A
2. Acrylonitrile	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
3. Benzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
4. Bromobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
5. Bromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
6. Bromodichloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
7. Bromoform	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
8. Bromomethane	U		µg/kg	200	1.0	05/18/11	V911E18A	05/18/11	V911E18A
9. 2-Butanone	U		µg/kg	750	1.0	05/18/11	V911E18A	05/18/11	V911E18A
10. n-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
11. sec-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
12. tert-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
13. Carbon Disulfide	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-013**

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Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>Dup</b>	Chain of Custody:	<b>108263</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>22</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>NA</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>				<b>Aliquot ID: 44577-013</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
14. Carbon Tetrachloride	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
15. Chlorobenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
16. Chloroethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
17. Chloroform	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
18. Chloromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
19. 2-Chlorotoluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
20. Dibromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/kg	11	1.0	05/18/11	V911E18A	05/18/11	V911E18A
22. Dibromomethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
28. 1,2-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
32. 1,2-Dichloropropane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
33. cis-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
35. Ethylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
36. Ethylene Dibromide	U		µg/kg	20	1.0	05/18/11	V911E18A	05/18/11	V911E18A
37. 2-Hexanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
38. Isopropylbenzene	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
39. Methyl Iodide	U		µg/kg	110	1.0	05/18/11	V911E18A	05/18/11	V911E18A
40. Methylene Chloride	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
42. MTBE	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
43. Naphthalene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
44. n-Propylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
45. Styrene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
48. Tetrachloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
49. Toluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
51. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
52. 1,1,2-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
53. Trichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-013**

Order: 44577  
Page: 29 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>Dup</b>	Chain of Custody:	<b>108263</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>22</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>NA</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-013</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
54. Trichlorofluoromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
55. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
59. Vinyl Chloride	U		µg/kg	40	1.0	05/18/11	V911E18A	05/18/11	V911E18A
60. Xylenes	U		µg/kg	150	1.0	05/18/11	V911E18A	05/18/11	V911E18A

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550C/EPA 8270C)</b>						<b>Aliquot ID: 44577-013A</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: HLS</b>
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
2. Acenaphthylene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
3. Anthracene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
4. Benzo(a)anthracene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
5. Benzo(a)pyrene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
6. Benzo(b)fluoranthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
7. Benzo(ghi)perylene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
8. Benzo(k)fluoranthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
9. Chrysene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
10. Dibenzo(a,h)anthracene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
11. Fluoranthene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
12. Fluorene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
13. Indeno(1,2,3-cd)pyrene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
14. 2-Methylnaphthalene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
15. Phenanthrene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B
16. Pyrene (SIM)	U		µg/kg	330	20	05/18/11	PS11E18F	05/20/11	S711E19B

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-014**

Order: 44577  
Page: 30 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>Trip Blank</b>	Chain of Custody:	<b>108263</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>23</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>NA</b>
<b>Sample Comments:</b> <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
<b>Definitions:</b> Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>						<b>Aliquot ID: 44577-014</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	05/18/11	V911E18A	05/18/11	V911E18A
2. Acrylonitrile	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
3. Benzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
4. Bromobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
5. Bromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
6. Bromodichloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
7. Bromoform	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
8. Bromomethane	U		µg/kg	200	1.0	05/18/11	V911E18A	05/18/11	V911E18A
9. 2-Butanone	U		µg/kg	750	1.0	05/18/11	V911E18A	05/18/11	V911E18A
10. n-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
11. sec-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
12. tert-Butylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
13. Carbon Disulfide	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
14. Carbon Tetrachloride	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
15. Chlorobenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
16. Chloroethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
17. Chloroform	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
18. Chloromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
19. 2-Chlorotoluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
20. Dibromochloromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/kg	10	1.0	05/18/11	V911E18A	05/18/11	V911E18A
22. Dibromomethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
27. 1,1-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
28. 1,2-Dichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
32. 1,2-Dichloropropane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
33. cis-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
34. trans-1,3-Dichloropropene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
35. Ethylbenzene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
36. Ethylene Dibromide	U		µg/kg	20	1.0	05/18/11	V911E18A	05/18/11	V911E18A
37. 2-Hexanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
38. Isopropylbenzene	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
39. Methyl Iodide	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
40. Methylene Chloride	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44577**  
**Laboratory Sample Number: 44577-014**

Order: 44577  
Page: 31 of 32  
Date: 05/23/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>Trip Blank</b>	Chain of Custody:	<b>108263</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>23</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Soil/Solid</b>	Collect Time:	<b>NA</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.					

<b>Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)</b>				<b>Aliquot ID: 44577-014</b>		<b>Matrix: Soil/Solid</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
41. 2-Methylnaphthalene (NN)	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
42. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	05/18/11	V911E18A	05/18/11	V911E18A
43. MTBE	U		µg/kg	250	1.0	05/18/11	V911E18A	05/18/11	V911E18A
44. Naphthalene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
45. n-Propylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
46. Styrene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
47. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
48. 1,1,2,2-Tetrachloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
49. Tetrachloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
50. Toluene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
51. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	05/18/11	V911E18A	05/18/11	V911E18A
52. 1,1,1-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
53. 1,1,2-Trichloroethane	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
54. Trichloroethene	U		µg/kg	50	1.0	05/18/11	V911E18A	05/18/11	V911E18A
55. Trichlorofluoromethane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
56. 1,2,3-Trichloropropane	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
57. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
58. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
59. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	05/18/11	V911E18A	05/18/11	V911E18A
60. Vinyl Chloride	U		µg/kg	40	1.0	05/18/11	V911E18A	05/18/11	V911E18A
61. Xylenes	U		µg/kg	150	1.0	05/18/11	V911E18A	05/18/11	V911E18A

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**Definitions/ Qualifiers:**

- A: Spike recovery or precision unusable due to dilution.
- B: The analyte was detected in the associated method blank.
- E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
- J: The concentration is an estimated value.
- M: Modified Method
- U: The analyte was not detected at or above the reporting limit.
- X: Matrix Interference has resulted in a raised reporting limit or distorted result.
- W: Results reported on a wet-weight basis.
- \*: Value reported is outside QA limits

**Exception Summary:**

- V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.



Accreditation Number:

**E-10395**



May 23, 2011

**Case Narrative**

Customer: SME

Project Identification: 30161 Southfield Road/PE54232D-08

Fibertec Project Number: 44577

**Sample Collection/ Receipt**

The following samples were collected on May 12, 2011 and received by Fibertec on May 16, 2011.

11 Soil Samples (including MS/MSD and blank)

All samples were received on ice and in good condition.

**Analysis**

Analyses were conducted in accordance with chain of custody and within hold times.

All applicable quality assurance / quality control parameters were within acceptance limits unless otherwise noted.

**PNAs**

Samples 44577-006 (MS-SB2-S5) and 44577-007 (MSD-SB2-S5) have estimated results for benzo(ghi)perylene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene, high continuing calibration verification. Results may be biased high.

Sample data has been reviewed, and reported results remain valid.

Courtney Stoel

Authorized Signature

5-23-2011

Date



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<b>email: lab@fiberotec.us</b>	<b>Fax: 231 775 8584</b>

**Industrial Hygiene Services, Inc.**  
1914 Holloway Drive  
Holt, MI 48842  
**Phone:** 517 699 0345  
**Fax:** 517 699 0382  
**email:** asbestos@fiberitec.us

**Geoprobe**  
11766 E. Grand River  
Brighton, MI 48116  
Phone: 810 220 3300  
**Fax: 810 220 3311**

Chain of Custody #  
**108262**

Client Name:	SME Plymouth					
Contact Person:	Deb Osieck / Jeremy Etter					
Project Name/ Number:	30161 Sixthfield Rd Project # PESYR320-08					
Purchase Order#						
Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	Turnaround	Matrix Code
5/12/11	12:00	9V	SBR-SI	✓	24 hour RUSH (surcharge applies)	S
	12:00	10V	SBR-SI	✓	48 hour RUSH (surcharge applies)	Soil
	2:30	11V	SBR-SI	✓	72 hour RUSH (surcharge applies)	GW Surface Water
	12V	105-SBR-SI	✓		Standard (5-7 bus days)	Air
	13V	105D-SBR-SI	✓		Other: Specify	Oil
	14V	SB2-55	✓			X Other Specify
	15V	105-SBR-55	✓			P Wipe
	16V	105D-SBR-55	✓			
	3.45	17V	SB4-SI	✓		
	11:00	18V	SB5-SI	✓		
				Remarks:		
				Only Vx is preserved		

**Comments:**

Relinquished By:

Reincubated By:

Relinquished By

**LAB USE ONLY**

10

Laboratory Tracking:  
Temperature at Receipt:

TERMS & CONDITIONS ON BACK

COC Revision: April, 2006





Friday, May 20, 2011

Fibertec Project Number: 44524  
Project Identification: 30161 Southfield Rd. /PE54232D-08  
Submittal Date: 05/13/2011

Mr. Jeremy Efros  
Soil and Materials Engineers, Inc. - Plymouth  
43980 Plymouth Oaks  
Plymouth, MI 48170

Dear Mr. Efros,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



Daryl P. Strandbergh  
Laboratory Director

DPS/kc

Enclosures



**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-001**

Order: 44524  
Page: 2 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>2</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

## Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Michigan 10 Elements by ICP/MS, Total Recoverable (EPA 3005A-M/EPA 6020A)</b>						<b>Aliquot ID: 44524-001A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	U		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
2. Barium	U		µg/L	100	10	05/17/11	PT11E17B	05/17/11	T211E17A
3. Cadmium	U		µg/L	1.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
4. Chromium	U		µg/L	10	10	05/17/11	PT11E17B	05/17/11	T211E17A
5. Copper	U		µg/L	4.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
6. Lead	U		µg/L	3.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
7. Selenium	10		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
8. Silver	U		µg/L	0.20	10	05/17/11	PT11E17B	05/17/11	T211E17A
9. Zinc	U		µg/L	50	10	05/17/11	PT11E17B	05/17/11	T211E17A

<b>Mercury by CVAAS, Total (EPA 7470A)</b>						<b>Aliquot ID: 44524-001A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/L	0.20	1.0	05/19/11	PM11E19A	05/19/11	M411E19A

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-001</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
2. Acrylonitrile	U		µg/L	2.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
3. Benzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
4. Bromobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
5. Bromochloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
7. Bromoform	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
8. Bromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
9. 2-Butanone	U		µg/L	25	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
15. Chlorobenzene	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
16. Chloroethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
17. Chloroform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
18. Chloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
20. Dibromochloromethane	U		µg/L	5.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
22. Dibromomethane	U		µg/L	5.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

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Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>2</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>				<b>Aliquot ID: 44524-001</b>		<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>		
<b>Parameter(s)</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>Reporting Limit</b>	<b>Dilution</b>	<b>Prep Date</b>	<b>Prep Batch</b>	<b>Analysis Date</b>	<b>Analysis Batch</b>
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
33. cis-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
34. trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
35. Ethylbenzene	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
37. 2-Hexanone	U		µg/L	50	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
39. Methyl Iodide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
40. Methylene Chloride	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
42. MTBE	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
43. Naphthalene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
45. Styrene	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
49. Toluene	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B
53. Trichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
56. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
60. Xylenes	U		µg/L	3.0	1.0	05/16/11	VB11E16B	05/16/11	VB11E16B

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>				<b>Aliquot ID: 44524-001B</b>		<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>		
<b>Parameter(s)</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>Reporting Limit</b>	<b>Dilution</b>	<b>Prep Date</b>	<b>Prep Batch</b>	<b>Analysis Date</b>	<b>Analysis Batch</b>
1914 Holloway Drive	Holt, MI	48842		T: (517) 699-0345				F: (517) 699-0388	
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8660 S. Mackinaw Trail	Cadillac, MI	49601		T: (231) 775-8368				F: (231) 775-8584	



**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-001**

Order: 44524  
Page: 4 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>2</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>				<b>Aliquot ID: 44524-001B</b>		<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
2. Acenaphthylene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
3. Anthracene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
4. Benzo(a)anthracene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
5. Benzo(a)pyrene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
6. Benzo(b)fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
7. Benzo(ghi)perylene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
8. Benzo(k)fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
9. Chrysene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
10. Dibenzo(a,h)anthracene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
11. Fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
12. Fluorene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
13. Indeno(1,2,3-cd)pyrene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
14. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
15. Phenanthrene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
16. Pyrene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-002**

Order: 44524  
Page: 5 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW MS</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>3</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Michigan 10 Elements by ICP/MS, Total Recoverable (EPA 3005A-M/EPA 6020A)</b>						<b>Aliquot ID: 44524-002A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>110</b>		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
2. Barium	<b>530</b>		µg/L	100	10	05/17/11	PT11E17B	05/17/11	T211E17A
3. Cadmium	<b>100</b>		µg/L	1.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
4. Chromium	<b>190</b>		µg/L	10	10	05/17/11	PT11E17B	05/17/11	T211E17A
5. Copper	<b>210</b>		µg/L	4.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
6. Lead	<b>200</b>		µg/L	3.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
7. Selenium	<b>120</b>		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
8. Silver	<b>100</b>		µg/L	0.20	10	05/17/11	PT11E17B	05/17/11	T211E17A
9. Zinc	<b>540</b>		µg/L	50	10	05/17/11	PT11E17B	05/17/11	T211E17A

<b>Mercury by CVAAS, Total (EPA 7470A)</b>						<b>Aliquot ID: 44524-002A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	<b>U</b>		µg/L	0.20	1.0	05/19/11	PM11E19A	05/19/11	M411E19A

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-002</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	<b>120</b>		µg/L	50	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
2. Acrylonitrile	<b>110</b>		µg/L	2.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
3. Benzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
4. Bromobenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
5. Bromochloromethane	<b>94</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
6. Bromodichloromethane	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
7. Bromoform	<b>130</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
8. Bromomethane	<b>130</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
9. 2-Butanone	<b>100</b>		µg/L	25	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
10. n-Butylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
11. sec-Butylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
12. tert-Butylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
13. Carbon Disulfide	<b>110</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
14. Carbon Tetrachloride	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
15. Chlorobenzene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
16. Chloroethane	<b>120</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
17. Chloroform	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
18. Chloromethane	<b>75</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
19. 2-Chlorotoluene	<b>110</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
20. Dibromochloromethane	<b>120</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
21. 1,2-Dibromo-3-chloropropane (NN)	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
22. Dibromomethane	<b>97</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
23. 1,2-Dichlorobenzene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-002**

Order: 44524  
Page: 6 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW MS</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>3</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

## Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-002</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
24. 1,3-Dichlorobenzene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
25. 1,4-Dichlorobenzene	<b>99</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
26. Dichlorodifluoromethane	<b>120</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
27. 1,1-Dichloroethane	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
28. 1,2-Dichloroethane	<b>240</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
29. 1,1-Dichloroethene	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
30. cis-1,2-Dichloroethene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
31. trans-1,2-Dichloroethene	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
32. 1,2-Dichloropropane	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
33. cis-1,3-Dichloropropene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
34. trans-1,3-Dichloropropene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
35. Ethylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
36. Ethylene Dibromide	<b>220</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
37. 2-Hexanone	<b>130</b>		µg/L	50	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
38. Isopropylbenzene	<b>110</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
39. Methyl Iodide	<b>110</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
40. Methylene Chloride	<b>120</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
41. 4-Methyl-2-pentanone	<b>130</b>		µg/L	50	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
42. MTBE	<b>240</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
43. Naphthalene	<b>100</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
44. n-Propylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
45. Styrene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
46. 1,1,1,2-Tetrachloroethane	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
47. 1,1,2,2-Tetrachloroethane	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
48. Tetrachloroethene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
49. Toluene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
50. 1,2,4-Trichlorobenzene	<b>100</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
51. 1,1,1-Trichloroethane	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
52. 1,1,2-Trichloroethane	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
53. Trichloroethene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
54. Trichlorofluoromethane	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
55. 1,2,3-Trichloropropane	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
56. 1,2,3-Trimethylbenzene (NN)	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
57. 1,2,4-Trimethylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
58. 1,3,5-Trimethylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
59. Vinyl Chloride	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
60. Xylenes	<b>330</b>		µg/L	3.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>						<b>Aliquot ID: 44524-002B</b>	<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1914 Holloway Drive	Holt, MI	48842		T: (517) 699-0345				F: (517) 699-0388	
11766 E. Grand River	Brighton, MI	48116		T: (810) 220-3300				F: (810) 220-3311	
8660 S. Mackinaw Trail	Cadillac, MI	49601		T: (231) 775-8368				F: (231) 775-8584	



**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-002**

Order: 44524  
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Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW MS</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>3</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>				<b>Aliquot ID: 44524-002B</b>		<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	<b>63</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
2. Acenaphthylene	<b>64</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
3. Anthracene	<b>57</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
4. Benzo(a)anthracene	<b>61</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
5. Benzo(a)pyrene	<b>66</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
6. Benzo(b)fluoranthene	<b>63</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
7. Benzo(ghi)perylene	<b>67</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
8. Benzo(k)fluoranthene	<b>64</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
9. Chrysene	<b>54</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
10. Dibenzo(a,h)anthracene	<b>62</b>		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
11. Fluoranthene	<b>67</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
12. Fluorene	<b>64</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
13. Indeno(1,2,3-cd)pyrene	<b>64</b>		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
14. 2-Methylnaphthalene	<b>55</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
15. Phenanthrene	<b>60</b>		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
16. Pyrene	<b>66</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-003**

Order: 44524  
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Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW MSD</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>4</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Michigan 10 Elements by ICP/MS, Total Recoverable (EPA 3005A-M/EPA 6020A)</b>						<b>Aliquot ID: 44524-003A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	<b>110</b>		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
2. Barium	<b>570</b>		µg/L	100	10	05/17/11	PT11E17B	05/17/11	T211E17A
3. Cadmium	<b>110</b>		µg/L	1.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
4. Chromium	<b>200</b>		µg/L	10	10	05/17/11	PT11E17B	05/17/11	T211E17A
5. Copper	<b>210</b>		µg/L	4.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
6. Lead	<b>210</b>		µg/L	3.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
7. Selenium	<b>120</b>		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
8. Silver	<b>100</b>		µg/L	0.20	10	05/17/11	PT11E17B	05/17/11	T211E17A
9. Zinc	<b>540</b>		µg/L	50	10	05/17/11	PT11E17B	05/17/11	T211E17A

<b>Mercury by CVAAS, Total (EPA 7470A)</b>						<b>Aliquot ID: 44524-003A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	<b>0.21</b>		µg/L	0.20	1.0	05/19/11	PM11E19A	05/19/11	M411E19A

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-003</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	<b>120</b>		µg/L	50	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
2. Acrylonitrile	<b>100</b>		µg/L	2.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
3. Benzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
4. Bromobenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
5. Bromochloromethane	<b>93</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
6. Bromodichloromethane	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
7. Bromoform	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
8. Bromomethane	<b>150</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
9. 2-Butanone	<b>110</b>		µg/L	25	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
10. n-Butylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
11. sec-Butylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
12. tert-Butylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
13. Carbon Disulfide	<b>110</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
14. Carbon Tetrachloride	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
15. Chlorobenzene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
16. Chloroethane	<b>120</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
17. Chloroform	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
18. Chloromethane	<b>79</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
19. 2-Chlorotoluene	<b>110</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
20. Dibromochloromethane	<b>120</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
21. 1,2-Dibromo-3-chloropropane (NN)	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
22. Dibromomethane	<b>99</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
23. 1,2-Dichlorobenzene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-003**

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Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW MSD</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>4</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

## Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-003</b>		<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
24. 1,3-Dichlorobenzene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
25. 1,4-Dichlorobenzene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
26. Dichlorodifluoromethane	<b>120</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
27. 1,1-Dichloroethane	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
28. 1,2-Dichloroethane	<b>250</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
29. 1,1-Dichloroethene	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
30. cis-1,2-Dichloroethene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
31. trans-1,2-Dichloroethene	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
32. 1,2-Dichloropropane	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
33. cis-1,3-Dichloropropene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
34. trans-1,3-Dichloropropene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
35. Ethylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
36. Ethylene Dibromide	<b>220</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
37. 2-Hexanone	<b>130</b>		µg/L	50	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
38. Isopropylbenzene	<b>110</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
39. Methyl Iodide	<b>130</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
40. Methylene Chloride	<b>120</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
41. 4-Methyl-2-pentanone	<b>130</b>		µg/L	50	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
42. MTBE	<b>230</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
43. Naphthalene	<b>110</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
44. n-Propylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
45. Styrene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
46. 1,1,1,2-Tetrachloroethane	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
47. 1,1,2,2-Tetrachloroethane	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
48. Tetrachloroethene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
49. Toluene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
50. 1,2,4-Trichlorobenzene	<b>110</b>		µg/L	5.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
51. 1,1,1-Trichloroethane	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
52. 1,1,2-Trichloroethane	<b>96</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
53. Trichloroethene	<b>100</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
54. Trichlorofluoromethane	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
55. 1,2,3-Trichloropropane	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
56. 1,2,3-Trimethylbenzene (NN)	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
57. 1,2,4-Trimethylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
58. 1,3,5-Trimethylbenzene	<b>110</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
59. Vinyl Chloride	<b>120</b>		µg/L	1.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C
60. Xylenes	<b>330</b>		µg/L	3.0	1.0	05/14/11	VB11E14C	05/16/11	VB11E14C

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>						<b>Aliquot ID: 44524-003B</b>		<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1914 Holloway Drive	Holt, MI	48842		T: (517) 699-0345				F: (517) 699-0388	
11766 E. Grand River	Brighton, MI	48116		T: (810) 220-3300				F: (810) 220-3311	
8660 S. Mackinaw Trail	Cadillac, MI	49601		T: (231) 775-8368				F: (231) 775-8584	



**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-003**

Order: 44524  
Page: 10 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW MSD</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>4</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>				<b>Aliquot ID: 44524-003B</b>		<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	<b>58</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
2. Acenaphthylene	<b>60</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
3. Anthracene	<b>52</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
4. Benzo(a)anthracene	<b>54</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
5. Benzo(a)pyrene	<b>57</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
6. Benzo(b)fluoranthene	<b>55</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
7. Benzo(ghi)perylene	<b>58</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
8. Benzo(k)fluoranthene	<b>56</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
9. Chrysene	<b>49</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
10. Dibenzo(a,h)anthracene	<b>55</b>		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
11. Fluoranthene	<b>58</b>		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
12. Fluorene	<b>57</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
13. Indeno(1,2,3-cd)pyrene	<b>55</b>		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
14. 2-Methylnaphthalene	<b>50</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
15. Phenanthrene	<b>55</b>		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
16. Pyrene	<b>58</b>		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-004**

Order: 44524  
Page: 11 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB-7-GW</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>7</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>09:30</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Michigan 10 Elements by ICP/MS, Total Recoverable (EPA 3005A-M/EPA 6020A)</b>						<b>Aliquot ID: 44524-004A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	U		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
2. Barium	U		µg/L	100	10	05/17/11	PT11E17B	05/17/11	T211E17A
3. Cadmium	U		µg/L	1.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
4. Chromium	U		µg/L	10	10	05/17/11	PT11E17B	05/17/11	T211E17A
5. Copper	U		µg/L	4.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
6. Lead	U		µg/L	3.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
7. Selenium	U		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
8. Silver	U		µg/L	0.20	10	05/17/11	PT11E17B	05/17/11	T211E17A
9. Zinc	U		µg/L	50	10	05/17/11	PT11E17B	05/17/11	T211E17A

<b>Mercury by CVAAS, Total (EPA 7470A)</b>						<b>Aliquot ID: 44524-004A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/L	0.20	1.0	05/19/11	PM11E19A	05/19/11	M411E19A

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-004</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
2. Acrylonitrile	U		µg/L	2.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
3. Benzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
4. Bromobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
5. Bromochloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
7. Bromoform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
8. Bromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
9. 2-Butanone	U		µg/L	25	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
15. Chlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
16. Chloroethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
17. Chloroform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
18. Chloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
20. Dibromochloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
22. Dibromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-004**

Order: 44524  
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Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB-7-GW</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>7</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>09:30</b>

## Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>				<b>Aliquot ID: 44524-004</b>		<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
33. cis-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
34. trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
35. Ethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
37. 2-Hexanone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
39. Methyl Iodide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
40. Methylene Chloride	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
42. MTBE	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
43. Naphthalene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
45. Styrene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
49. Toluene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
53. Trichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
56. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
60. Xylenes	U		µg/L	3.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>				<b>Aliquot ID: 44524-004B</b>		<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1914 Holloway Drive	Holt, MI	48842		T: (517) 699-0345				F: (517) 699-0388	
11766 E. Grand River	Brighton, MI	48116		T: (810) 220-3300				F: (810) 220-3311	
8660 S. Mackinaw Trail	Cadillac, MI	49601		T: (231) 775-8368				F: (231) 775-8584	



**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-004**

Order: 44524  
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Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB-7-GW</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>7</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>09:30</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>				<b>Aliquot ID: 44524-004B</b>		<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
2. Acenaphthylene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
3. Anthracene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
4. Benzo(a)anthracene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
5. Benzo(a)pyrene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
6. Benzo(b)fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
7. Benzo(ghi)perylene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
8. Benzo(k)fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
9. Chrysene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
10. Dibenzo(a,h)anthracene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
11. Fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
12. Fluorene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
13. Indeno(1,2,3-cd)pyrene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
14. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
15. Phenanthrene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
16. Pyrene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-005**

Order: 44524  
Page: 14 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>DUP</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>8</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>NA</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Michigan 10 Elements by ICP/MS, Total Recoverable (EPA 3005A-M/EPA 6020A)</b>						<b>Aliquot ID: 44524-005A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	U		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
2. Barium	130		µg/L	100	10	05/17/11	PT11E17B	05/17/11	T211E17A
3. Cadmium	U		µg/L	1.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
4. Chromium	U		µg/L	10	10	05/17/11	PT11E17B	05/17/11	T211E17A
5. Copper	U		µg/L	4.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
6. Lead	U		µg/L	3.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
7. Selenium	U		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
8. Silver	U		µg/L	0.20	10	05/17/11	PT11E17B	05/17/11	T211E17A
9. Zinc	U		µg/L	50	10	05/17/11	PT11E17B	05/17/11	T211E17A

<b>Mercury by CVAAS, Total (EPA 7470A)</b>						<b>Aliquot ID: 44524-005A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/L	0.20	1.0	05/19/11	PM11E19A	05/19/11	M411E19A

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-005</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
2. Acrylonitrile	U		µg/L	2.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
3. Benzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
4. Bromobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
5. Bromochloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
7. Bromoform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
8. Bromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
9. 2-Butanone	U		µg/L	25	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
15. Chlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
16. Chloroethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
17. Chloroform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
18. Chloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
20. Dibromochloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
22. Dibromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-005**

Order: 44524  
Page: 15 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>DUP</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>8</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>NA</b>

## Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>				<b>Aliquot ID: 44524-005</b>		<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
33. cis-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
34. trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
35. Ethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
37. 2-Hexanone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
39. Methyl Iodide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
40. Methylene Chloride	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
42. MTBE	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
43. Naphthalene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
45. Styrene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
49. Toluene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
53. Trichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
56. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
60. Xylenes	U		µg/L	3.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>				<b>Aliquot ID: 44524-005B</b>		<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
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11766 E. Grand River	Brighton, MI	48116		T: (810) 220-3300				F: (810) 220-3311	
8660 S. Mackinaw Trail	Cadillac, MI	49601		T: (231) 775-8368				F: (231) 775-8584	



**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-005**

Order: 44524  
Page: 16 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>DUP</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>8</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>NA</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>				<b>Aliquot ID: 44524-005B</b>		<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
2. Acenaphthylene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
3. Anthracene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
4. Benzo(a)anthracene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
5. Benzo(a)pyrene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
6. Benzo(b)fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
7. Benzo(ghi)perylene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
8. Benzo(k)fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
9. Chrysene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
10. Dibenzo(a,h)anthracene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
11. Fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
12. Fluorene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
13. Indeno(1,2,3-cd)pyrene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
14. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
15. Phenanthrene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
16. Pyrene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-006**

Order: 44524  
Page: 17 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>EQUIP BLANK</b>		Chain of Custody:	<b>108264</b>	
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>24</b>		Collect Date:	<b>05/12/11</b>	
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>		Collect Time:	<b>16:00</b>	

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Michigan 10 Elements by ICP/MS, Total Recoverable (EPA 3005A-M/EPA 6020A)</b>				<b>Aliquot ID: 44524-006A</b>		<b>Matrix: Ground Water</b>	<b>Analyst: JLH</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	U		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
2. Barium	U		µg/L	100	10	05/17/11	PT11E17B	05/17/11	T211E17A
3. Cadmium	U		µg/L	1.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
4. Chromium	U		µg/L	10	10	05/17/11	PT11E17B	05/17/11	T211E17A
5. Copper	U		µg/L	4.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
6. Lead	U		µg/L	3.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
7. Selenium	U		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
8. Silver	U		µg/L	0.20	10	05/17/11	PT11E17B	05/17/11	T211E17A
9. Zinc	U		µg/L	50	10	05/17/11	PT11E17B	05/17/11	T211E17A

<b>Chromium, Hexavalent, Dissolved (EPA 7196A)</b>				<b>Aliquot ID: 44524-006C</b>		<b>Matrix: Ground Water</b>	<b>Analyst: CML</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/L	5.0	1.0	NA	NA	05/13/11 15:30	WF11E13A

<b>Mercury by CVAAS, Total (EPA 7470A)</b>				<b>Aliquot ID: 44524-006A</b>		<b>Matrix: Ground Water</b>	<b>Analyst: MAP</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/L	0.20	1.0	05/19/11	PM11E19A	05/19/11	M411E19A

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>				<b>Aliquot ID: 44524-006</b>		<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
2. Acrylonitrile	U		µg/L	2.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
3. Benzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
4. Bromobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
5. Bromochloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
7. Bromoform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
8. Bromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
9. 2-Butanone	U		µg/L	25	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
15. Chlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
16. Chloroethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
17. Chloroform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
18. Chloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

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Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>EQUIP BLANK</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>24</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>16:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-006</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
20. Dibromochloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
22. Dibromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
33. cis-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
34. trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
35. Ethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
37. 2-Hexanone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
39. Methyl Iodide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
40. Methylene Chloride	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
42. MTBE	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
43. Naphthalene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
45. Styrene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
49. Toluene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
53. Trichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
56. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-006**

Order: 44524  
Page: 19 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>EQUIP BLANK</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>24</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>16:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-006</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
60. Xylenes	U		µg/L	3.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>						<b>Aliquot ID: 44524-006B</b>	<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
2. Acenaphthylene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
3. Anthracene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
4. Benzo(a)anthracene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
5. Benzo(a)pyrene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
6. Benzo(b)fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
7. Benzo(ghi)perylene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
8. Benzo(k)fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
9. Chrysene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
10. Dibenzo(a,h)anthracene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
11. Fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
12. Fluorene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
13. Indeno(1,2,3-cd)pyrene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
14. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
15. Phenanthrene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
16. Pyrene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-007**

Order: 44524  
Page: 20 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>FIELD BLANK</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>25</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>16:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Michigan 10 Elements by ICP/MS, Total Recoverable (EPA 3005A-M/EPA 6020A)</b>						<b>Aliquot ID: 44524-007A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JLH</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	U		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
2. Barium	U		µg/L	100	10	05/17/11	PT11E17B	05/17/11	T211E17A
3. Cadmium	U		µg/L	1.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
4. Chromium	U		µg/L	10	10	05/17/11	PT11E17B	05/17/11	T211E17A
5. Copper	U		µg/L	4.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
6. Lead	U		µg/L	3.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
7. Selenium	U		µg/L	5.0	10	05/17/11	PT11E17B	05/17/11	T211E17A
8. Silver	U		µg/L	0.20	10	05/17/11	PT11E17B	05/17/11	T211E17A
9. Zinc	U		µg/L	50	10	05/17/11	PT11E17B	05/17/11	T211E17A

<b>Chromium, Hexavalent, Dissolved (EPA 7196A)</b>						<b>Aliquot ID: 44524-007C</b>	<b>Matrix: Ground Water</b>	<b>Analyst: CML</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/L	5.0	1.0	NA	NA	05/13/11 15:31	WF11E13A

<b>Mercury by CVAAS, Total (EPA 7470A)</b>						<b>Aliquot ID: 44524-007A</b>	<b>Matrix: Ground Water</b>	<b>Analyst: MAP</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/L	0.20	1.0	05/19/11	PM11E19A	05/19/11	M411E19A

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-007</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
2. Acrylonitrile	U		µg/L	2.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
3. Benzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
4. Bromobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
5. Bromochloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
7. Bromoform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
8. Bromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
9. 2-Butanone	U		µg/L	25	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
15. Chlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
16. Chloroethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
17. Chloroform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
18. Chloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-007**

Order: 44524  
Page: 21 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>FIELD BLANK</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>25</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>16:00</b>

## Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-007</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
20. Dibromochloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
22. Dibromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
33. cis-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
34. trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
35. Ethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
37. 2-Hexanone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
39. Methyl Iodide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
40. Methylene Chloride	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
42. MTBE	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
43. Naphthalene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
45. Styrene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
49. Toluene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
53. Trichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
56. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

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**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-007**

Order: 44524  
Page: 22 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>FIELD BLANK</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>25</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>16:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-007</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
60. Xylenes	U		µg/L	3.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

<b>Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3535A/EPA 8270C)</b>						<b>Aliquot ID: 44524-007B</b>	<b>Matrix: Ground Water</b>	<b>Analyst: TMC</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
2. Acenaphthylene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
3. Anthracene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
4. Benzo(a)anthracene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
5. Benzo(a)pyrene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
6. Benzo(b)fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
7. Benzo(ghi)perylene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
8. Benzo(k)fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
9. Chrysene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
10. Dibenzo(a,h)anthracene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
11. Fluoranthene	U		µg/L	1.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
12. Fluorene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
13. Indeno(1,2,3-cd)pyrene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
14. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
15. Phenanthrene	U		µg/L	2.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A
16. Pyrene	U		µg/L	5.0	1.0	05/16/11	PS11E16I	05/17/11	S311E17A

1914 Holloway Drive  
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8660 S. Mackinaw Trail

Holt, MI 48842  
Brighton, MI 48116  
Cadillac, MI 49601

T: (517) 699-0345  
T: (810) 220-3300  
T: (231) 775-8368

F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>TRIP BLANK</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>26</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>NA</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-008</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
2. Acrylonitrile	U		µg/L	2.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
3. Benzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
4. Bromobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
5. Bromochloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
7. Bromoform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
8. Bromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
9. 2-Butanone	U		µg/L	25	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
15. Chlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
16. Chloroethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
17. Chloroform	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
18. Chloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
20. Dibromochloromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
21. 1,2-Dibromo-3-chloropropane (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
22. Dibromomethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
33. cis-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
34. trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
35. Ethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
37. 2-Hexanone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
39. Methyl Iodide	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
40. Methylene Chloride	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

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 F: (231) 775-8584



**Analytical Laboratory Report**  
**Laboratory Project Number: 44524**  
**Laboratory Sample Number: 44524-008**

Order: 44524  
Page: 24 of 25  
Date: 05/20/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>TRIP BLANK</b>	Chain of Custody:	<b>108264</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>26</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>NA</b>

## Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)</b>						<b>Aliquot ID: 44524-008</b>	<b>Matrix: Ground Water</b>	<b>Analyst: JAS</b>	
<b>Parameter(s)</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>Reporting Limit</b>	<b>Dilution</b>	<b>Prep Date</b>	<b>Prep Batch</b>	<b>Analysis Date</b>	<b>Analysis Batch</b>
41. 2-Methylnaphthalene (NN)	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
42. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
43. MTBE	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
44. Naphthalene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
45. n-Propylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
46. Styrene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
47. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
48. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
49. Tetrachloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
50. Toluene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
51. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
52. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
53. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
54. Trichloroethene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
55. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
56. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
57. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
58. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
59. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
60. Vinyl Chloride	U		µg/L	1.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C
61. Xylenes	U		µg/L	3.0	1.0	05/14/11	VB11E14C	05/15/11	VB11E14C

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F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584

**Definitions/ Qualifiers:**

- A: Spike recovery or precision unusable due to dilution.
- B: The analyte was detected in the associated method blank.
- E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
- J: The concentration is an estimated value.
- M: Modified Method
- U: The analyte was not detected at or above the reporting limit.
- X: Matrix Interference has resulted in a raised reporting limit or distorted result.
- W: Results reported on a wet-weight basis.
- \*: Value reported is outside QA limits

**Exception Summary:**



Accreditation Number:

**E-10395**



May 20, 2011

Case Narrative

Customer: SME

Project Identification: 30161 Southfield Road/PE54232D-08

Fibertec Project Number: 44524

Sample Collection/ Receipt

The following samples were collected on May 12, 2011 and received by Fibertec on May 13, 2011.

8 Water Samples (including MS/MSD and blanks)

All samples were received on ice and in good condition.

Analysis

Analyses were conducted in accordance with chain of custody and within hold times. The hexavalent chromium for samples 44524-001 (SB3-GW), 44524-002 (SB3-GW MS), 44524-003 (SB3-GW MSD) and 44524-004 (SB7-GW) were analyzed on Fibertec project number 44508 due to the short hold time.

All applicable quality assurance / quality control parameters were within acceptance limits unless otherwise noted.

Sample data has been reviewed, and reported results remain valid.

Courtney Stael  
Authorized Signature

5-20-2011  
Date



<b>1914 Holloway Drive</b> <b>Holt, MI 48842</b> <b>Phone: 517 699 0345</b> <b>Fax: 517 699 0388</b> <b>email: lab@fiberdec.us</b>	<b>Analytical Laboratory</b> <b>8660 S. Mackinaw Trail</b> <b>Cadillac, MI 49601</b> <b>Phone: 231 775 8368</b> <b>Fax: 231 775 8584</b>
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**Industrial Hygiene Services, Inc.**  
**1914 Holloway Drive**  
**Holt, MI 48842**  
**Phone: 517 699 0345**  
**Fax: 517 699 0382**  
**email: asbestos@fiberotec.us**

**Geoprobe**  
11766 E. Grand River  
Brighton, MI 48116  
Phone: 810 220 3300  
Fax: 810 220 3311

Chain of Custody #  
**108264**

Client Name:	SME Polymer Inc		
Contact Person:	Bob Osuch / Jeremy Efros		
Project Name/ Number:	3D161 Southfield Rd Proj # PES5423Q D-08		
RE RIGHT CORNER FOR CODE)			
CONTAINERS			
ED (Y/N)			
8260			
8270			
Details	4426/144771		
SUS			
Cr			
PARAMETERS			
		Turnaround	
	24 hour RUSH [surcharge applies]	S Soil	GW Ground Water
	48 hour RUSH [surcharge applies]	W Water SW Surface Water	
	72 hour RUSH [surcharge applies]	A Air	WW Waste Water
	Standard [5-7 bus. days]	O Oil	X Other - Specify
Other Specify			
P Wipe			

Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor				MATRIX (S)	# OF CONC.	PRESERVE	
				1	2	3	4	VOC	PAH	MIN	Astero
				X	X	X	X	⊕			
5/2/11	3:00	2	SB3-6W								
		3	MSD-SB3-6W								
		4	MSD-SB3-6W								
		5	SB7-6W								
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Comments: Her Shear for SBR-514 the. SBR-514 was 12' checked on chain. Picked up ~~the~~

Reinquished By: Customer Service Dept. Simeon Simeon  
Date/ Time: 10/10/2013

Reinhardt RV  
Shen Smith Since 5/1/16 b-  
Date/Time

Reinstituted By: Sgt. -ficer Jeremy Eros 3/19/10

5/13/1994

**REEDON**

TERMS & CONDITIONS ON BACK

二  
三

COC Revision: April, 2006



Thursday, May 19, 2011

Fibertec Project Number: 44508  
Project Identification: 30161 Southfield Rd. /PE54232D-08  
Submittal Date: 05/12/2011

Mr. Jeremy Efros  
Soil and Materials Engineers, Inc. - Plymouth  
43980 Plymouth Oaks  
Plymouth, MI 48170

Dear Mr. Efros,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



Daryl P. Strandbergh  
Laboratory Director

DPS/kc

Enclosures



**Analytical Laboratory Report**  
**Laboratory Project Number: 44508**  
**Laboratory Sample Number: 44508-001**

Order: 44508  
Page: 2 of 10  
Date: 05/19/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB1-GW</b>	Chain of Custody:	<b>108276</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>1</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>12:30</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Chromium, Hexavalent, Dissolved (EPA 7196A)</b>		<b>Aliquot ID: 44508-001</b>			<b>Matrix: Ground Water</b>	<b>Analyst: CML</b>			
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/L	5.0	1.0	NA	NA	05/12/11 17:45	WF11E12A

1914 Holloway Drive  
11766 E. Grand River  
8660 S. Mackinaw Trail

Holt, MI 48842  
Brighton, MI 48116  
Cadillac, MI 49601

T: (517) 699-0345  
T: (810) 220-3300  
T: (231) 775-8368

F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584



**Analytical Laboratory Report**  
**Laboratory Project Number: 44508**  
**Laboratory Sample Number: 44508-002**

Order: 44508  
Page: 3 of 10  
Date: 05/19/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW</b>	Chain of Custody:	<b>108276</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>2</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Chromium, Hexavalent, Dissolved (EPA 7196A)</b>		<b>Aliquot ID: 44508-002</b>			<b>Matrix: Ground Water</b>	<b>Analyst: CML</b>			
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/L	5.0	1.0	NA	NA	05/12/11 17:45	WF11E12A

1914 Holloway Drive  
11766 E. Grand River  
8660 S. Mackinaw Trail

Holt, MI 48842  
Brighton, MI 48116  
Cadillac, MI 49601

T: (517) 699-0345  
T: (810) 220-3300  
T: (231) 775-8368

F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584



**Analytical Laboratory Report**  
**Laboratory Project Number: 44508**  
**Laboratory Sample Number: 44508-003**

Order: 44508  
Page: 4 of 10  
Date: 05/19/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>MS-SB3-GW</b>	Chain of Custody:	<b>108276</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>3</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Chromium, Hexavalent, Dissolved (EPA 7196A)</b>		<b>Aliquot ID: 44508-003</b>				<b>Matrix: Ground Water</b>	<b>Analyst: CML</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	<b>52</b>		µg/L	5.0	1.0	NA	NA	05/12/11 17:46	WF11E12A

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11766 E. Grand River  
8660 S. Mackinaw Trail

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Brighton, MI 48116  
Cadillac, MI 49601

T: (517) 699-0345  
T: (810) 220-3300  
T: (231) 775-8368

F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584



**Analytical Laboratory Report**  
**Laboratory Project Number: 44508**  
**Laboratory Sample Number: 44508-004**

Order: 44508  
Page: 5 of 10  
Date: 05/19/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>MSD-SB3-GW</b>	Chain of Custody:	<b>108276</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>4</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>14:00</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Chromium, Hexavalent, Dissolved (EPA 7196A)</b>		<b>Aliquot ID: 44508-004</b>			<b>Matrix: Ground Water</b>	<b>Analyst: CML</b>			
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	<b>52</b>		µg/L	5.0	1.0	NA	NA	05/12/11 17:46	WF11E12A

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8660 S. Mackinaw Trail

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Brighton, MI 48116  
Cadillac, MI 49601

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T: (810) 220-3300  
T: (231) 775-8368

F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584



**Analytical Laboratory Report**  
**Laboratory Project Number: 44508**  
**Laboratory Sample Number: 44508-005**

Order: 44508  
Page: 6 of 10  
Date: 05/19/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB5-GW</b>	Chain of Custody:	<b>108276</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>5</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>11:30</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Chromium, Hexavalent, Dissolved (EPA 7196A)</b>		<b>Aliquot ID: 44508-005</b>			<b>Matrix: Ground Water</b>	<b>Analyst: CML</b>			
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/L	5.0	1.0	NA	NA	05/12/11 17:47	WF11E12A

1914 Holloway Drive  
11766 E. Grand River  
8660 S. Mackinaw Trail

Holt, MI 48842  
Brighton, MI 48116  
Cadillac, MI 49601

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T: (810) 220-3300  
T: (231) 775-8368

F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584



**Analytical Laboratory Report**  
**Laboratory Project Number: 44508**  
**Laboratory Sample Number: 44508-006**

Order: 44508  
Page: 7 of 10  
Date: 05/19/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB6-GW</b>	Chain of Custody:	<b>108276</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>6</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>10:30</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Chromium, Hexavalent, Dissolved (EPA 7196A)</b>		<b>Aliquot ID: 44508-006</b>				<b>Matrix: Ground Water</b>	<b>Analyst: CML</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/L	5.0	1.0	NA	NA	05/12/11 17:48	WF11E12A

1914 Holloway Drive  
11766 E. Grand River  
8660 S. Mackinaw Trail

Holt, MI 48842  
Brighton, MI 48116  
Cadillac, MI 49601

T: (517) 699-0345  
T: (810) 220-3300  
T: (231) 775-8368

F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584



**Analytical Laboratory Report**  
**Laboratory Project Number: 44508**  
**Laboratory Sample Number: 44508-007**

Order: 44508  
Page: 8 of 10  
Date: 05/19/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB7-GW</b>	Chain of Custody:	<b>108276</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>7</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>09:30</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Chromium, Hexavalent, Dissolved (EPA 7196A)</b>		<b>Aliquot ID: 44508-007</b>				<b>Matrix: Ground Water</b>	<b>Analyst: CML</b>		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/L	5.0	1.0	NA	NA	05/12/11 17:49	WF11E12A

1914 Holloway Drive  
11766 E. Grand River  
8660 S. Mackinaw Trail

Holt, MI 48842  
Brighton, MI 48116  
Cadillac, MI 49601

T: (517) 699-0345  
T: (810) 220-3300  
T: (231) 775-8368

F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584



**Analytical Laboratory Report**  
**Laboratory Project Number: 44508**  
**Laboratory Sample Number: 44508-008**

Order: 44508  
Page: 9 of 10  
Date: 05/19/11

Client Identification:	<b>Soil and Materials Engineers, Inc. - Plymouth</b>	Sample Description:	<b>SB3-GW</b>	Chain of Custody:	<b>108276</b>
Client Project Name:	<b>30161 Southfield Rd.</b>	Sample No:	<b>8</b>	Collect Date:	<b>05/12/11</b>
Client Project No:	<b>PE54232D-08</b>	Sample Matrix:	<b>Ground Water</b>	Collect Time:	<b>NA</b>

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

<b>Chromium, Hexavalent, Dissolved (EPA 7196A)</b>		<b>Aliquot ID: 44508-008</b>			<b>Matrix: Ground Water</b>	<b>Analyst: CML</b>			
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Chromium VI	U		µg/L	5.0	1.0	NA	NA	05/12/11 17:49	WF11E12A

1914 Holloway Drive  
11766 E. Grand River  
8660 S. Mackinaw Trail

Holt, MI 48842  
Brighton, MI 48116  
Cadillac, MI 49601

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T: (810) 220-3300  
T: (231) 775-8368

F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584

**Definitions/ Qualifiers:**

- A: Spike recovery or precision unusable due to dilution.
- B: The analyte was detected in the associated method blank.
- E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
- J: The concentration is an estimated value.
- M: Modified Method
- U: The analyte was not detected at or above the reporting limit.
- X: Matrix Interference has resulted in a raised reporting limit or distorted result.
- W: Results reported on a wet-weight basis.
- \*: Value reported is outside QA limits

**Exception Summary:**



Accreditation Number:

**E-10395**



May 19, 2011

**Case Narrative**

Customer: SME

Project Identification: 30161 Southfield Road/PE54232D-08

Fibertec Project Number: 44508

**Sample Collection/ Receipt**

The following samples were collected on and received by Fibertec on May 12, 2011.

8 Water Samples (including MS/MSD)

All samples were received on ice and in good condition.

**Analysis**

Analyses were conducted in accordance with chain of custody and within hold times. The analysis was conducted on all samples due to the 24 hour hold time. The revised chain of custody was received after the analysis was already performed.

All applicable quality assurance / quality control parameters were within acceptance limits unless otherwise noted.

Sample data has been reviewed, and reported results remain valid.

Kyleen Randall  
Authorized Signature

5/19/11  
Date

**FiberTec**  
environmental  
services

Analytical Laboratory  
1914 Holloway Drive  
Holt, MI 48842  
Phone: 517 699 0345  
Fax: 517 699 0388  
email: lab@fiberotec.us

Industrial Hygiene Services, Inc.  
1914 Holloway Drive  
Cadillac, MI 49601  
Phone: 231 775 8368  
Fax: 231 775 8584  
email: asbestos@fiberotec.us

Geoprobe  
11766 E. Grand River  
Brighton, MI 48116  
Phone: 810 220 3300  
Fax: 810 220 3311

Chain of Custody #  
**108276**

PAGE    of   

Client Name:	SME - Plymouth			PARAMETERS	Turnaround	Matrix Code
Contact Person:	Deb Oreck / Jeremy Etres				24 hour RUSH (surcharge applies)	S Soil
Project Name/Number:	30161 Southfield Rd Project # PESKRRD-08				48 hour RUSH (surcharge applies)	GW Ground Water
					72 hour RUSH (surcharge applies)	W Water SW Surface Water
					Standard (5-7 bus. days)	A Air
					<input checked="" type="checkbox"/> Standard (5-7 bus. days)	WW Waste Water
					<input type="checkbox"/> Other-Specify _____	O Oil
						X Other-Specify _____
						P Wipe _____
Purchase Order#	Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE) # OF CONTAINERS PRESERVED (Y/N)
						Hex Cr
5/12/10	1	12:30	1	SB1-6w	6/10	
1	2:00	2	SB3-6w		1 1 1	
	2:00	3	SB5-SB3-6w		1	
	2:00	4	MSO-SB3-6w		1	
	11:30	5	SB5-6w		1	
	16:30	6	SB6-6w		1	
	9:30	7	SB7-6w		1	
	8	Duo			✓ ✓	
Comments: we are not sure what location will be analyzed, we please preserve samples.						
Relinquished By:	<i>John-Sony SME</i>			Date/Time	Received By:	Remarks:
Relinquished By:	<i>John-Sony SME</i>			5/12/10 3:10	<i>John-Sony SME</i>	
Relinquished By:	<i>John-Sony SME</i>			Date/Time	Received By Lab/Facility:	
LAB USE ONLY: FiberTec project number: Laboratory tracking: Temperature at Receipt:	<b>44508</b>			5/12/10 4:27	<i>John-Sony SME</i>	

TERMS & CONDITIONS ON BACK

COC Revision: April, 2006

RCVD ON  
ICE  
5.11 C

emailed 5/12 at 8:01pm

**FiberTec**  
environmental  
services

**1914 Holloway Drive**  
**Holt, MI 48842**  
**Phone: 517 699 0345**  
**Fax: 517 699 0388**  
**email: lab@fiberotec.us**

**Analytical Laboratory**  
**8660 S. Mackinaw Trail**  
**Cadillac, MI 49601**  
**Phone: 231 775 8368**  
**Fax: 231 775 8584**

**Industrial Hygiene Services,  
1914 Holloway Drive,  
Holt, MI 48842  
Phone: 517 699 0345  
Fax: 517 699 0382  
email: asbestos@fiberfec.us**

**Geoprobe**  
11766 E. Grand River  
Brighton, MI 48116  
Phone: 810 220 3300  
Fax: 810 220 3311

Chancery  
138276

TERMS & CONDITIONS ON BACK



# BULK SAMPLE ANALYTICAL REPORT

Fibertec IHS Project #29701-1  
NVLAP Accreditation #101510-0

Client Name: SME  
 Project Name: 30161 Southfield Rd., Project #PE542320-08  
 Summary: 7 Submitted Bulk Samples, 7 Sample Layers Analyzed.

Date Sampled: 5/15/2011  
 Date Submitted: 5/16/2011  
 Date Analyzed: 5/19/2011

Client P.O. #: N/A  
 C.O.C. #: N/A

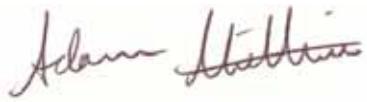
Fibertec Sample No.	Client I.D. No.	Description / Location	Asbestos Type	Non-Asbestos Containing Portion	Analyst
1	SB2-S1	Brown granular material. (Non-homogeneous)	NAD	Non-fibrous material 100%	ARM
2	MS-SB2-S1	Brown granular material. (Non-homogeneous)	NAD	Non-fibrous material 100%	ARM
3	MSD-SB2-S1	Brown granular material. (Non-homogeneous)	NAD	Non-fibrous material 100%	ARM
4	SB4-S1	Brown granular material. (Non-homogeneous)	NAD	Non-fibrous material 100%	ARM
5	SB5-S2	Brown granular material. (Non-homogeneous)	NAD	Non-fibrous material 100%	ARM
6	SB6-S5	Brown granular material. (Non-homogeneous)	NAD	Non-fibrous material 100%	ARM
7	Dup	Brown granular material. (Non-homogeneous)	NAD	Non-fibrous material 100%	ARM

**Comments**

Bulk samples are analyzed using the USEPA Test Method EPA/600/R-93/116. The constituent percent reported represents an estimate of the area percent of the component. The test report relates only to items tested. This report is not intended to be used as a product endorsement by NVLAP or any agency of the U.S. Government. Fine fibers like those in floor tile may not be discernible by this method. This report shall not be reproduced, except in full, without the written approval of the laboratory. Individual sample layers are homogeneous, unless otherwise noted. Test items were received in acceptable condition. Revision 4.0 dated 12/8/2010.

If no asbestos was/were detected in the sample/samples the acronym NAD (no asbestos detected) will appear in the Asbestos Type column of the report.

Approved Signatory:



Date: 5/19/2011





2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

**Fibertec, Inc.  
1914 Holloway Dr.  
Holt, MI. 48842**

**Re: QuanTEM ID 195342**

QuanTEM appreciates the opportunity to provide analytical testing services to you. Attached are your reports and other supporting documentation for the above referenced project.

Thank you for making QuanTEM your lab of choice. If you have any question concerning this or other reports please feel free to contact us at 800-822-1650.

We continually work to improve our service. Help us out by providing feed back on your experience at [www.QuanTEM.com](http://www.QuanTEM.com). Click on Service Survey and fill out the form. We look forward to hearing from you.

Respectfully,  
QuanTEM Laboratories, LLC.





2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

**Transmission Electron Microscopy  
Asbestos Analysis Report  
Non Potable Water Sample**

QuanTEM Set ID: 195342  
Client Sample ID: 44508-001D  
Sample Location:N/A  
Date/Time Prepared: 5/20/11  
Prepared By: Leigh Armstrong  
Analyzed By: Jeff Mlekush  
Methodology: EPA 600/4-84-043

Client: Fibertec Incorporation  
Account Number: A116  
Sample Aliquot (mL): 100  
Filter Type : 0.22um 47mm MCE (1385mm<sup>2</sup>)  
Filter Area Analyzed (mm<sup>2</sup>): 0.111  
Instrument: JEOL 100CXII/18KX Magnification  
Grid Archival: 1736 B2 B3 B4

**Analysis Results**

Total Confirmed Chrysotile  
Total Confirmed Amphibole

**Structures Counted**

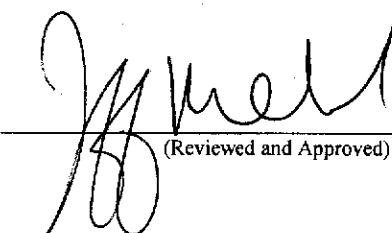
35  
None Detected

Analytical Sensitivity

0.125 MFL

**Total Concentration**  
Asbestos Fibers  $\geq$ 0.5um

4.37 MFL

  
\_\_\_\_\_  
(Reviewed and Approved)

May 26, 2011  
(Date)



2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

**Transmission Electron Microscopy  
Asbestos Analysis Report  
Non Potable Water Sample**

QuanTEM Set ID: 195342  
Client Sample ID: 44508-005D  
Sample Location:N/A  
Date/Time Prepared: 5/20/11  
Prepared By: Leigh Armstrong  
Analyzed By: Jeff Mlekush  
Methodology: EPA 600/4-84-043

Client: Fibertec Incorporation  
Account Number: A116  
Sample Aliquot (mL): 100  
Filter Type : 0.22um 47mm MCE (1385mm<sup>2</sup>)  
Filter Area Analyzed (mm<sup>2</sup>): 0.111  
Instrument: JEOL 100CXII/18KX Magnification  
Grid Archival: 1736 B5 C1 C2

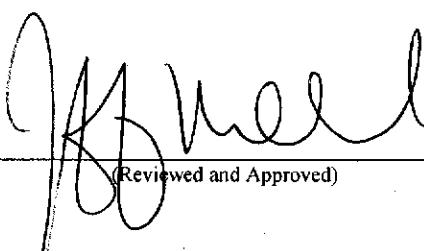
**Analysis Results**

Total Confirmed Chrysotile  
Total Confirmed Amphibole

**Structures Counted**  
51  
None Detected

Analytical Sensitivity 0.125 MFL

**Total Concentration** 6.36 MFL  
Asbestos Fibers >0.5um

  
\_\_\_\_\_  
Reviewed and Approved)

May 26, 2011  
(Date)



2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

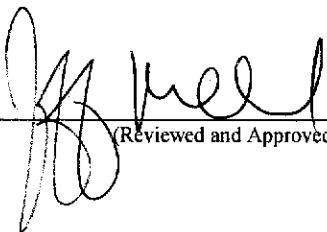
**Transmission Electron Microscopy  
Asbestos Analysis Report  
Non Potable Water Sample**

QuanTEM Set ID: 195342  
Client Sample ID: 44508-006D  
Sample Location:N/A  
Date/Time Prepared: 5/20/11  
Prepared By: Leigh Armstrong  
Analyzed By: Jeff Mlekush  
Methodology: EPA 600/4-84-043

Client: Fibertec Incorporation  
Account Number: A116  
  
Sample Aliquot (mL): 100  
Filter Type : 0.22um 47mm MCE (1385mm<sup>2</sup>)  
Filter Area Analyzed (mm<sup>2</sup>): 0.0888  
Instrument: JEOL 100CXII/18KX Magnification  
Grid Archival: 1736 C3 C4 C5

**Analysis Results**

	<b>Structures Counted</b>
Total Confirmed Chrysotile	52
Total Confirmed Amphibole	None Detected
Analytical Sensitivity	0.156 MFL
<b>Total Concentration</b>	<b>8.11 MFL</b>
Asbestos Fibers >0.5um	

  
\_\_\_\_\_  
(Reviewed and Approved)

May 26, 2011  
(Date)



2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

**Transmission Electron Microscopy  
Asbestos Analysis Report  
Non Potable Water Sample**

QuanTEM Set ID: 195342  
Client Sample ID: 44524-001C  
Sample Location:N/A  
Date/Time Prepared: 5/20/11  
Prepared By: Leigh Armstrong  
Analyzed By: Jeff Mlekush  
Methodology: EPA 600/4-84-043

Client: Fibertec Incorporation  
Account Number: A116  
Sample Aliquot (mL): 100  
Filter Type : 0.22um 47mm MCE (1385mm<sup>2</sup>)  
Filter Area Analyzed (mm<sup>2</sup>): 0.111  
Instrument: JEOL 100CXII/18KX Magnification  
Grid Archival: 1736 D1 D2 D3

**Analysis Results**

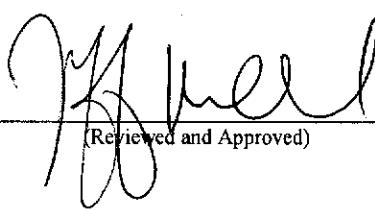
Total Confirmed Chrysotile  
Total Confirmed Amphibole

**Structures Counted**

5  
None Detected

Analytical Sensitivity                                    0.125 MFL

**Total Concentration**  
Asbestos Fibers >0.5um                                    0.624 MFL

  
\_\_\_\_\_  
(Reviewed and Approved)

May 26, 2011  
\_\_\_\_\_  
(Date)



2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

**Transmission Electron Microscopy  
Asbestos Analysis Report  
Non Potable Water Sample**

QuanTEM Set ID: 195342  
Client Sample ID: 44524-002C  
Sample Location:N/A  
Date/Time Prepared: 5/20/11  
Prepared By: Leigh Armstrong  
Analyzed By: Jeff Mlekush  
Methodology: EPA 600/4-84-043

Client: Fibertec Incorporation  
Account Number: A116  
  
Sample Aliquot (mL): 100  
Filter Type : 0.22um 47mm MCE (1385mm<sup>2</sup>)  
Filter Area Analyzed (mm<sup>2</sup>): 0.111  
Instrument: JEOL 100CXII/18KX Magnification  
Grid Archival: 1736 D4 D5 E1

**Analysis Results**

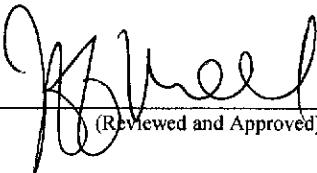
**Structures Counted**

Total Confirmed Chrysotile	7
Total Confirmed Amphibole	None Detected

Analytical Sensitivity	0.125 MFL
------------------------	-----------

<b>Total Concentration</b>	<b>0.873 MFL</b>
Asbestos Fibers $\geq$ 0.5um	

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(Reviewed and Approved)

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May 26, 2011

(Date)



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**Transmission Electron Microscopy  
Asbestos Analysis Report  
Non Potable Water Sample**

QuanTEM Set ID: 195342  
Client Sample ID: 44524-003C  
Sample Location:N/A  
Date/Time Prepared: 5/20/11  
Prepared By: Leigh Armstrong  
Analyzed By: Jeff Mlekush  
Methodology: EPA 600/4-84-043

Client: Fibertec Incorporation  
Account Number: A116  
Sample Aliquot (mL): 100  
Filter Type : 0.22um 47mm MCE (1385mm<sup>2</sup>)  
Filter Area Analyzed (mm<sup>2</sup>): 0.111  
Instrument: JEOL 100CXII/18KX Magnification  
Grid Archival: 1736 E2 E3 E4

**Analysis Results**

Total Confirmed Chrysotile  
Total Confirmed Amphibole

**Structures Counted**  
28  
None Detected

Analytical Sensitivity                            0.125 MFL

**Total Concentration**  
Asbestos Fibers ≥0.5um                            3.49 MFL

  
\_\_\_\_\_  
(Reviewed and Approved)

May 26, 2011  
(Date)



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**Transmission Electron Microscopy  
Asbestos Analysis Report  
Non Potable Water Sample**

QuanTEM Set ID: 195342  
Client Sample ID: 44524-004C  
Sample Location:N/A  
Date/Time Prepared: 5/20/11  
Prepared By: Leigh Armstrong  
Analyzed By: Jeff Mlekush  
Methodology: EPA 600/4-84-043

Client: Fibertec Incorporation  
Account Number: A116  
  
Sample Aliquot (mL): 100  
Filter Type : 0.22um 47mm MCE (1385mm<sup>2</sup>)  
Filter Area Analyzed (mm<sup>2</sup>): 0.111  
Instrument: JEOL 100CXII/18KX Magnification  
Grid Archival: 1736 E5 A6 A7

**Analysis Results**

Total Confirmed Chrysotile  
Total Confirmed Amphibole

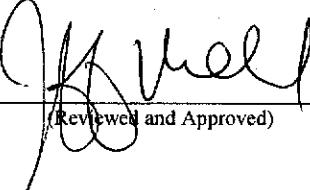
**Structures Counted**  
22  
None Detected

Analytical Sensitivity

0.125 MFL

**Total Concentration**  
Asbestos Fibers  $\geq 0.5\mu\text{m}$

2.75 MFL

  
\_\_\_\_\_  
(Reviewed and Approved)

May 26, 2011  
(Date)



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**Transmission Electron Microscopy  
Asbestos Analysis Report  
Non Potable Water Sample**

QuanTEM Set ID: 195342  
Client Sample ID: 44524-005C  
Sample Location:N/A  
Date/Time Prepared: 5/20/11  
Prepared By: Leigh Armstrong  
Analyzed By: Jeff Mlekush  
Methodology: EPA 600/4-84-043

Client: Fibertec Incorporation  
Account Number: A116  
Sample Aliquot (mL): 100  
Filter Type : 0.22um 47mm MCE (1385mm<sup>2</sup>)  
Filter Area Analyzed (mm<sup>2</sup>): 0.111  
Instrument: JEOL 100CXII/18KX Magnification  
Grid Archival: 1736 A8 A9 A10

**Analysis Results**

Total Confirmed Chrysotile  
Total Confirmed Amphibole

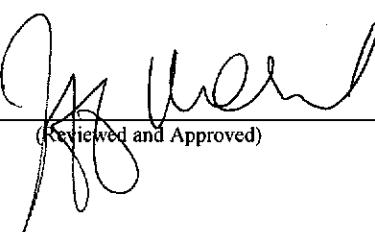
**Structures Counted**  
None Detected  
None Detected

Analytical Sensitivity

0.125 MFL

**Total Concentration**  
Asbestos Fibers  $\geq$ 0.5um

<0.125 MFL

  
\_\_\_\_\_  
(Reviewed and Approved)

May 26, 2011  
(Date)









**Quality Control Report**  
**Matrix Spike Summary**  
**Laboratory Project Number: 44577**

Order: 44577  
Page: 1 of 4  
Date: 05/23/11

Client Identification: **Soil and Materials Engineers, Inc. - Plymouth** Client Project Name: **30161 Southfield Rd.** Client Project No: **PE54232D-08**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable

Michigan 10 Elements by ICP/MS (EPA 0200.2-M/EPA 6020A)							Matrix: Soil/Solid			
Parent Sample:	44577-005A	Description:	SB2-S5	Sample No:	14		Collect Date:	05/12/11	14:30	
MS Sample ID:	44577-006A	Description:	MS-SB2-S5	Sample No:	15		Collect Date:	05/12/11	14:30	
MSD Sample ID:	44577-007A	Description:	MSD-SB2-S5	Sample No:	16		Collect Date:	05/12/11	14:30	
Parameter(s)	Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	MS/MSD LCL - UCL	RPD %	RPD UCL
1. Arsenic	3000	µg/kg	10000	15700	12700	128	97	70 - 130	28*	20
2. Barium	5100	µg/kg	50000	56600	50800	103	91	70 - 130	12	20
3. Cadmium	54	µg/kg	10000	10300	10200	103	101	70 - 130	2	20
4. Chromium	3300	µg/kg	20000	26100	22600	114	97	70 - 130	16	20
5. Copper	7400	µg/kg	20000	26900	24300	98	84	70 - 130	15	20
6. Lead	2700	µg/kg	20000	24800	21400	110	94	70 - 130	16	20
7. Selenium	270	µg/kg	10000	10800	9980	105	97	70 - 130	8	20
8. Silver	<100	µg/kg	10000	9570	9700	96	97	70 - 130	1	20
9. Zinc	14000	µg/kg	50000	74700	60300	122	94	70 - 130	26*	20

Mercury by CVAAS (EPA 7471B)							Matrix: Soil/Solid			
Parent Sample:	44577-005A	Description:	SB2-S5	Sample No:	14		Collect Date:	05/12/11	14:30	
MS Sample ID:	44577-006A	Description:	MS-SB2-S5	Sample No:	15		Collect Date:	05/12/11	14:30	
MSD Sample ID:	44577-007A	Description:	MSD-SB2-S5	Sample No:	16		Collect Date:	05/12/11	14:30	
Parameter(s)	Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	MS/MSD LCL - UCL	RPD %	RPD UCL
1. Mercury	<50	µg/kg (wet)	200	204	213	102	107	70 - 130	5	20

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)							Matrix: Soil/Solid			
Parent Sample:	44577-005	Description:	SB2-S5	Sample No:	14		Collect Date:	05/12/11	14:30	
MS Sample ID:	44577-006	Description:	MS-SB2-S5	Sample No:	15		Collect Date:	05/12/11	14:30	
MSD Sample ID:	44577-007	Description:	MSD-SB2-S5	Sample No:	16		Collect Date:	05/12/11	14:30	
Parameter(s)	Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	MS/MSD LCL - UCL	RPD %	RPD UCL
1. Acetone	<1000	µg/kg (wet)	5000	6490	6720	130	134	40 - 207	3	20
2. Acrylonitrile	<100	µg/kg (wet)	5000	7100	7190	142	144	45 - 180	1	20
3. Benzene	<50	µg/kg (wet)	5000	4950	4680	99	94	63 - 141	5	20
4. Bromobenzene	<100	µg/kg (wet)	5000	5680	5370	114	107	70 - 144	6	20
5. Bromochloromethane	<100	µg/kg (wet)	5000	5250	4870	105	97	42 - 161	8	20
6. Bromodichloromethane	<100	µg/kg (wet)	5000	5510	5220	110	104	60 - 150	6	20
7. Bromoform	<100	µg/kg (wet)	5000	6360	6230	127*	125*	50 - 117	2	20
8. Bromomethane	<200	µg/kg (wet)	5000	4110	4120	82	82	58 - 217	0	20
9. 2-Butanone	<750	µg/kg (wet)	5000	4850	4770	97	95	42 - 193	2	20
10. n-Butylbenzene	<50	µg/kg (wet)	5000	6060	5750	121	115	65 - 151	5	20
11. sec-Butylbenzene	<50	µg/kg (wet)	5000	5970	5650	119	113	68 - 147	5	20
12. tert-Butylbenzene	<50	µg/kg (wet)	5000	6010	5720	120	114	68 - 140	5	20
13. Carbon Disulfide	<250	µg/kg (wet)	5000	4880	4750	98	95	36 - 143	3	20
14. Carbon Tetrachloride	<50	µg/kg (wet)	5000	4880	4710	98	94	50 - 159	4	20

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**Quality Control Report  
Matrix Spike Summary  
Laboratory Project Number: 44577**

Order: 44577  
Page: 2 of 4  
Date: 05/23/11

Client Identification: **Soil and Materials Engineers,  
Inc. - Plymouth** Client Project Name: **30161 Southfield Rd.** Client Project No: **PE54232D-08**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)							Matrix: Soil/Solid			
Parameter(s)	Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	MS/MSD LCL - UCL	RPD %	RPD UCL
15. Chlorobenzene	<50	µg/kg (wet)	5000	5180	4820	104	96	72 - 135	8	20
16. Chloroethane	<250	µg/kg (wet)	5000	4630	4310	93	86	16 - 207	8	20
17. Chloroform	<50	µg/kg (wet)	5000	4740	4430	95	89	47 - 159	7	20
18. Chloromethane	<250	µg/kg (wet)	5000	4060	4030	81	81	14 - 185	0	20
19. 2-Chlorotoluene	<50	µg/kg (wet)	5000	5830	5480	117	110	73 - 141	6	20
20. Dibromochloromethane	<100	µg/kg (wet)	5000	6030	5790	121	116	59 - 130	4	20
21. 1,2-Dibromo-3-chloropropane	<10	µg/kg (wet)	5000	6700	6700	134	134	34 - 164	0	20
22. Dibromomethane	<250	µg/kg (wet)	5000	5210	4970	104	99	66 - 134	5	20
23. 1,2-Dichlorobenzene	<100	µg/kg (wet)	5000	5340	5060	107	101	76 - 128	6	20
24. 1,3-Dichlorobenzene	<100	µg/kg (wet)	5000	5280	5030	106	101	72 - 136	5	20
25. 1,4-Dichlorobenzene	<100	µg/kg (wet)	5000	5000	4670	100	93	74 - 127	7	20
26. Dichlorodifluoromethane	<250	µg/kg (wet)	5000	4520	4510	90	90	10 - 207	0	20
27. 1,1-Dichloroethane	<50	µg/kg (wet)	5000	5670	5330	113	107	42 - 157	5	20
28. 1,2-Dichloroethane	<50	µg/kg (wet)	10000	9820	9170	98	92	56 - 146	6	20
29. 1,1-Dichloroethene	<50	µg/kg (wet)	5000	4980	4790	100	96	34 - 165	4	20
30. cis-1,2-Dichloroethene	<50	µg/kg (wet)	5000	5690	5360	114	107	43 - 170	6	20
31. trans-1,2-Dichloroethene	<50	µg/kg (wet)	5000	4520	4290	90	86	49 - 162	5	20
32. 1,2-Dichloropropane	<50	µg/kg (wet)	5000	5370	5150	107	103	62 - 151	4	20
33. cis-1,3-Dichloropropene	<50	µg/kg (wet)	5000	5930	5570	119	111	45 - 156	7	20
34. trans-1,3-Dichloropropene	<50	µg/kg (wet)	5000	5930	5570	119	111	40 - 157	7	20
35. Ethylbenzene	<50	µg/kg (wet)	5000	5280	5020	106	100	76 - 137	6	20
36. Ethylene Dibromide	<20	µg/kg (wet)	10000	11100	10600	111	106	71 - 133	5	20
37. 2-Hexanone	<2500	µg/kg (wet)	5000	7280	7260	146	145	29 - 211	1	20
38. Isopropylbenzene	<250	µg/kg (wet)	5000	5730	5440	115	109	68 - 153	5	20
39. Methyl Iodide	<100	µg/kg (wet)	5000	4470	4230	89	85	17 - 150	5	20
40. Methylene Chloride	<100	µg/kg (wet)	5000	4840	4520	97	90	38 - 180	7	20
41. 4-Methyl-2-pentanone	<2500	µg/kg (wet)	5000	6240	6210	125	124	55 - 161	1	20
42. MTBE	<250	µg/kg (wet)	10000	11800	11200	118	112	58 - 147	5	20
43. Naphthalene	<330	µg/kg (wet)	5000	6230	6170	125	123	45 - 180	2	20
44. n-Propylbenzene	<100	µg/kg (wet)	5000	6040	5690	121	114	71 - 146	6	20
45. Styrene	<50	µg/kg (wet)	5000	5940	5670	119	113	72 - 138	5	20
46. 1,1,1,2-Tetrachloroethane	<100	µg/kg (wet)	5000	5670	5380	113	108	61 - 131	5	20
47. 1,1,2,2-Tetrachloroethane	<50	µg/kg (wet)	5000	6200	6020	124	120	72 - 145	3	20
48. Tetrachloroethene	<50	µg/kg (wet)	5000	5300	5020	106	100	50 - 151	6	20
49. Toluene	<50	µg/kg (wet)	5000	5030	4790	101	96	65 - 144	5	20
50. 1,2,4-Trichlorobenzene	<330	µg/kg (wet)	5000	5470	5260	109	105	54 - 152	4	20
51. 1,1,1-Trichloroethane	<50	µg/kg (wet)	5000	4660	4440	93	89	46 - 156	4	20
52. 1,1,2-Trichloroethane	<50	µg/kg (wet)	5000	5700	5340	114	107	80 - 129	6	20
53. Trichloroethene	<50	µg/kg (wet)	5000	5100	4850	102	97	65 - 144	5	20

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**Quality Control Report**  
**Matrix Spike Summary**  
**Laboratory Project Number: 44577**

Order: 44577  
Page: 3 of 4  
Date: 05/23/11

Client Identification: **Soil and Materials Engineers,  
Inc. - Plymouth** Client Project Name: **30161 Southfield Rd.** Client Project No: **PE54232D-08**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)							Matrix: Soil/Solid			
Parent Sample:	44577-005	Description:	SB2-S5	Sample No:	14	Collect Date:	05/12/11	14:30		
MS Sample ID:	44577-006	Description:	MS-SB2-S5	Sample No:	15	Collect Date:	05/12/11	14:30		
MSD Sample ID:	44577-007	Description:	MSD-SB2-S5	Sample No:	16	Collect Date:	05/12/11	14:30		
Parameter(s)	Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	MS/MSD LCL - UCL	RPD %	RPD UCL
54. Trichlorofluoromethane	<100	µg/kg (wet)	5000	4570	4400	91	88	31 - 226	3	20
55. 1,2,3-Trichloropropane	<100	µg/kg (wet)	5000	6150	5910	123	118	74 - 139	4	20
56. 1,2,3-Trimethylbenzene	<100	µg/kg (wet)	5000	5660	5360	113	107	77 - 133	5	20
57. 1,2,4-Trimethylbenzene	190	µg/kg (wet)	5000	6040	5700	117	110	71 - 139	6	20
58. 1,3,5-Trimethylbenzene	<100	µg/kg (wet)	5000	5930	5630	119	113	71 - 138	5	20
59. Vinyl Chloride	<40	µg/kg (wet)	5000	5320	5150	106	103	25 - 189	3	20
60. Xylenes	<150	µg/kg (wet)	15000	16500	15700	110	105	69 - 134	5	20

Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550C/EPA 8270C)							Matrix: Soil/Solid			
Parent Sample:	44577-005A	Description:	SB2-S5	Sample No:	14	Collect Date:	05/12/11	14:30		
MS Sample ID:	44577-006A	Description:	MS-SB2-S5	Sample No:	15	Collect Date:	05/12/11	14:30		
MSD Sample ID:	44577-007A	Description:	MSD-SB2-S5	Sample No:	16	Collect Date:	05/12/11	14:30		
Parameter(s)	Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	MS/MSD LCL - UCL	RPD %	RPD UCL
1. Acenaphthene	<330	µg/kg (wet)	2670	2520	2720	94	102	44 - 132	8	30
2. Acenaphthylene	<330	µg/kg (wet)	2670	2460	2650	92	100	45 - 132	8	30
3. Anthracene	<330	µg/kg (wet)	2670	2480	2690	93	101	46 - 131	8	30
4. Benzo(a)anthracene	<330	µg/kg (wet)	2670	2540	2910	91	105	48 - 134	14	30
5. Benzo(a)pyrene	<330	µg/kg (wet)	2670	2700	3100	98	112	44 - 142	13	30
6. Benzo(b)fluoranthene	<330	µg/kg (wet)	2670	2810	3310	99	118	45 - 142	18	30
7. Benzo(ghi)perylene	<330	µg/kg (wet)	2670	2510	2610	93	96	36 - 149	3	30
8. Benzo(k)fluoranthene	<330	µg/kg (wet)	2670	2730	2980	96	105	43 - 143	9	30
9. Chrysene	<330	µg/kg (wet)	2670	2380	2810	85	101	39 - 132	17	30
10. Dibenzo(a,h)anthracene	<330	µg/kg (wet)	2670	2680	2730	101	102	41 - 142	1	30
11. Fluoranthene	<330	µg/kg (wet)	2670	2950	4100	101	145*	48 - 143	36*	30
12. Fluorene	<330	µg/kg (wet)	2670	2620	2810	98	105	46 - 133	7	30
13. Indeno(1,2,3-cd)pyrene	<330	µg/kg (wet)	2670	2620	2810	97	104	40 - 147	7	30
14. 2-Methylnaphthalene	<330	µg/kg (wet)	2670	2030	2270	76	85	27 - 120	11	30
15. Phenanthrene	<330	µg/kg (wet)	2670	2690	3620	96	131	46 - 136	31*	30
16. Pyrene	<330	µg/kg (wet)	2670	2720	3560	95	126	47 - 143	28	30

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**Definitions/ Qualifiers:**

- A: Spike recovery or precision unusable due to dilution.
- B: The analyte was detected in the associated method blank.
- E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
- J: The concentration is an estimated value.
- M: Modified Method
- U: The analyte was not detected at or above the reporting limit.
- X: Matrix Interference has resulted in a raised reporting limit or distorted result.
- W: Results reported on a wet-weight basis.
- \*: Value reported is outside QA limits

**Exception Summary:**

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

**Laboratory Approval:**



Daryl P. Strandbergh  
Laboratory Director



Peter J. Priniski  
Quality Assurance Officer



Accreditation Number:

**E-10395**